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NEWS 6 MAY 19 Derwent World Patents Index to be reloaded and enhanced  
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USPATFULL/USPAT2  
NEWS 8 MAY 30 The F-Term thesaurus is now available in CA/CAplus  
NEWS 9 JUN 02 The first reclassification of IPC codes now complete in  
INPADOC  
NEWS 10 JUN 26 TULSA/TULSA2 reloaded and enhanced with new search and  
and display fields  
NEWS 11 JUN 28 Price changes in full-text patent databases EPFULL and PCTFULL  
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NEWS 13 JUL 14 FSTA enhanced with Japanese patents  
NEWS 14 JUL 19 Coverage of Research Disclosure reinstated in DWPI  
NEWS 15 AUG 09 INSPEC enhanced with 1898-1968 archive  
NEWS 16 AUG 28 ADISCTI Reloaded and Enhanced  
NEWS 17 AUG 30 CA(SM)/CAplus(SM) Austrian patent law changes

NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT  
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NEWS HOURS	STN Operating Hours Plus Help Desk Availability
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10518454.trn

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STRUCTURE FILE UPDATES: 5 SEP 2006 HIGHEST RN 905905-44-4  
DICTIONARY FILE UPDATES: 5 SEP 2006 HIGHEST RN 905905-44-4

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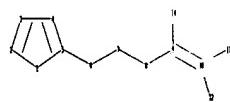
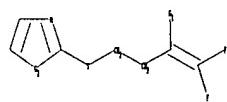
TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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Uploading C:\Program Files\Stnexp\Queries\10518454\Struc 1.str



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chain nodes :  
6 7 8 9 10 11 12 14  
ring nodes :  
1 2 3 4 5  
chain bonds :  
5-6 6-7 7-8 8-9 9-10 9-14 10-11 10-12  
ring bonds :  
1-2 1-5 2-3 3-4 4-5  
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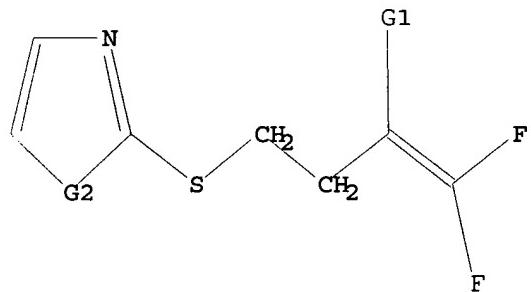
G1:H,F

G2:O,S,N

Match level :  
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS  
10:CLASS 11:CLASS 12:CLASS 14:CLASS

L1 STRUCTURE UPLOADED

=> d  
L1 HAS NO ANSWERS  
L1 STR



G1 H,F  
G2 O,S,N

Structure attributes must be viewed using STN Express query preparation.

=> l1  
SAMPLE SEARCH INITIATED 06:31:57 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 42 TO ITERATE

100.0% PROCESSED 42 ITERATIONS 23 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 452 TO 1228  
PROJECTED ANSWERS: 173 TO 747

L2 23 SEA SSS SAM L1

=> 11 full  
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FULL SCREEN SEARCH COMPLETED - 629 TO ITERATE

100.0% PROCESSED 629 ITERATIONS 350 ANSWERS  
SEARCH TIME: 00.00.01

L3 350 SEA SSS FUL L1

=> file caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
FULL ESTIMATED COST ENTRY SESSION  
166.94 167.15

FILE 'CAPLUS' ENTERED AT 06:32:30 ON 06 SEP 2006  
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FILE LAST UPDATED: 4 Sep 2006 (20060904/ED)

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=> 13  
L4 33 L3

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60 PEROXOMONOSULFURIC  
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(PEROXOMONOSULFURIC(W)ACID)  
L5 0 L4 AND PEROXOMONOSULFURIC ACID

=> d 14 ibib abs hitstr 1-33

L4 ANSWER 1 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2005:1310514 CAPLUS  
DOCUMENT NUMBER: 144:36333  
TITLE: Preparation of thiazoloquinolines and their use as agrochemical fungicides  
INVENTOR(S): Ono, Toshiharu; Kutsuma, Seiichi; Tahara, Tomomi  
PATENT ASSIGNEE(S): Hokko Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

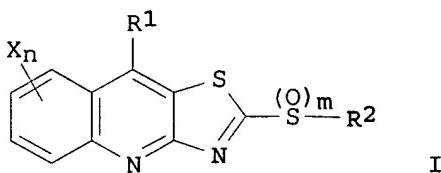
Japanese

FAMILY ACC. NUM. COUNT:

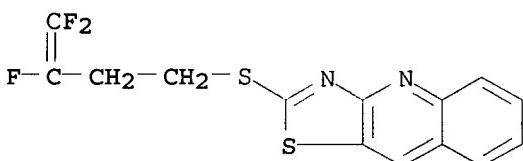
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PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005343857	A2	20051215	JP 2004-167890	20040607
PRIORITY APPLN. INFO.:			JP 2004-167890	20040607
OTHER SOURCE(S): GI	MARPAT	144:36333		



- AB Title compds. I [R1 = H, lower alkyl; R2 = lower (halo)alkyl, (halo)alkenyl, alkynyl, cyanoalkyl; X = lower (halo)alkyl, halo; m = 0-2; n = 0-4; when R2 = Me, then m = 1, 2] are prepared. Thus, refluxing 2-mercaptopthiazolo[4,5-b]quinoline with ClCH<sub>2</sub>CN and K<sub>2</sub>CO<sub>3</sub> in DMF gave 75% 2-(cyanomethylthio)thiazolo[4,5-b]quinoline, which at 100 ppm showed 60-80% inhibition against Puccinia recondita without damaging wheat.
- IT 870976-39-9P  
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of thiazoloquinolines as agrochem. fungicides)
- RN 870976-39-9 CAPLUS
- CN Thiazolo[4,5-b]quinoline, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



- L4 ANSWER 2 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN
- ACCESSION NUMBER: 2004:964974 CAPLUS
- DOCUMENT NUMBER: 141:390414
- TITLE: Synergistic nematocidal, insecticidal and acaricidal compositions based on trifluorobutynyl derivatives
- INVENTOR(S): Kraus, Anton; Ishikawa, Koichi
- PATENT ASSIGNEE(S): Bayer Cropscience Aktiengesellschaft, Germany; Andersch, Wolfram
- SOURCE: PCT Int. Appl., 47 pp.
- CODEN: PIXXD2
- DOCUMENT TYPE: Patent
- LANGUAGE: German

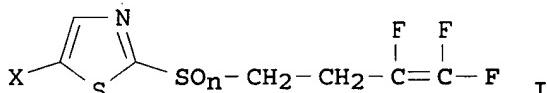
FAMILY ACC. NUM. COUNT: 1

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WO 2004095930	A1	20041111	WO 2004-EP4167	20040420
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10319590	A1	20041118	DE 2003-10319590	20030502
AU 2004233566	A1	20041111	AU 2004-233566	20040420
CA 2524060	AA	20041111	CA 2004-2524060	20040420
EP 1622452	A1	20060208	EP 2004-728332	20040420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004010038	A	20060425	BR 2004-10038	20040420
CN 1812714	A	20060802	CN 2004-80018510	20040420
PRIORITY APPLN. INFO.:			DE 2003-10319590	A 20030502
			WO 2004-EP4167	W 20040420

OTHER SOURCE(S): MARPAT 141:390414

GI



AB The title compns. comprise a trifluorobutylene derivative I (X = halo; n = 0, 1 or 2) and a known insecticide.

IT 786675-31-8 786675-32-9 786675-33-0  
786675-34-1 786675-35-2 786675-36-3  
786675-37-4 786675-38-5

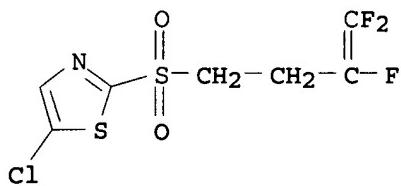
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(synergistic nematocidal, insecticidal and acaricidal composition)

RN 786675-31-8 CAPLUS

CN Cyclopropanecarboxylic acid, 3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propenyl]-  
2,2-dimethyl-, (2,3,5,6-tetrafluoro-4-methylphenyl)methyl ester,  
(1R,3R)-rel-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-  
butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

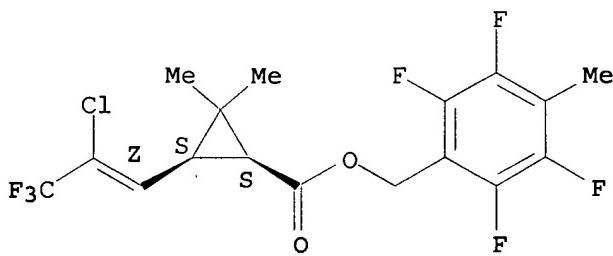
CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 79538-32-2  
CMF C17 H14 Cl F7 O2

Relative stereochemistry.  
Double bond geometry as shown.

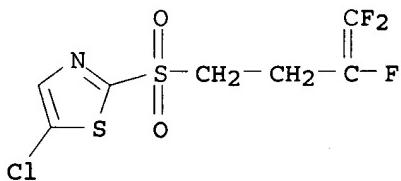


RN 786675-32-9 CAPLUS

CN Propanal, 2-methyl-2-((methylthio)-, O-[(methylamino)carbonyl]oxime, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

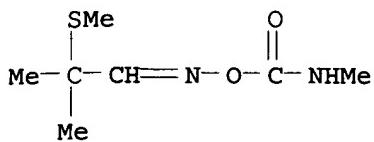
CM 1

CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 116-06-3  
CMF C7 H14 N2 O2 S



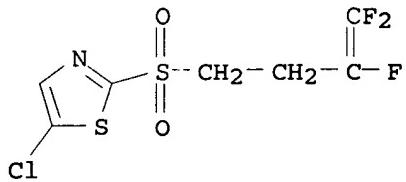
RN 786675-33-0 CAPLUS

CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro-, [C(E)]-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2

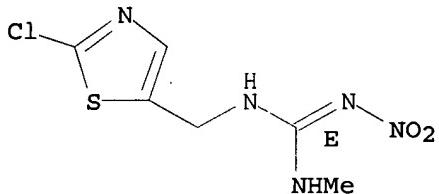


CM 2

CRN 210880-92-5

CMF C6 H8 Cl N5 O2 S

Double bond geometry as shown.



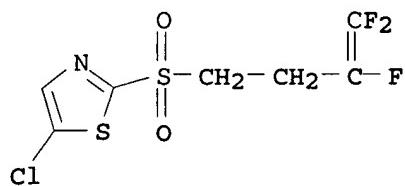
RN 786675-34-1 CAPLUS

CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

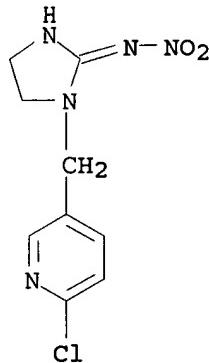
CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 138261-41-3  
CMF C9 H10 C1 N5 O2

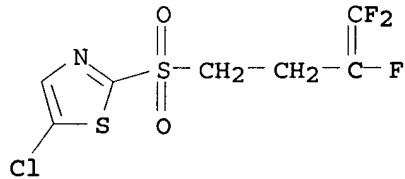


RN 786675-35-2 CAPLUS

CN Phosphorothioic acid, O-[2-(1,1-dimethylethyl)-5-pyrimidinyl] O-ethyl O-(1-methylethyl) ester, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

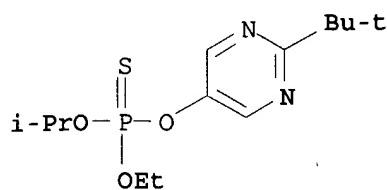
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CRN 318290-98-1  
CMF C7 H5 C1 F3 N O2 S2



CM 2

CRN 96182-53-5  
CMF C13 H23 N2 O3 P S



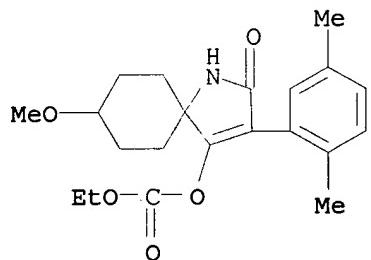
RN 786675-36-3 CAPLUS

CN Carbonic acid, 3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-azaspiro[4.5]dec-3-en-4-yl ethyl ester, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butene)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 382608-10-8

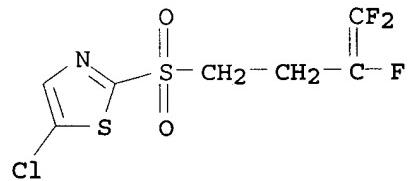
CMF C21 H27 N O5



CM 2

CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2



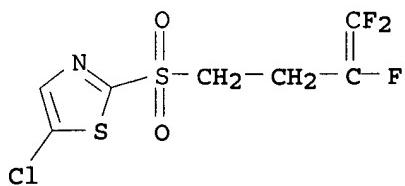
RN 786675-37-4 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butene)sulfonyl]-, mixt. with spinosad (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2



CM 2

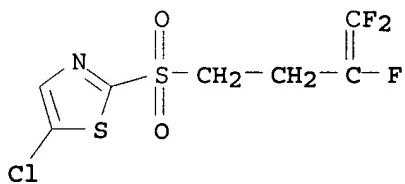
CRN 168316-95-8  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 786675-38-5 CAPLUS  
CN 1H-Pyrazole-3-carbonitrile, 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenoxy)sulfonyl]thiazole (9CI) (CA INDEX NAME)

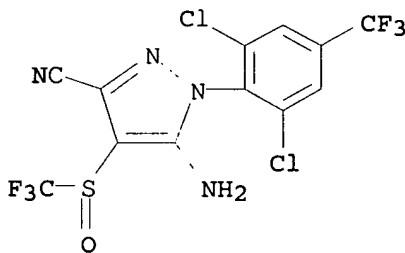
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CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 120068-37-3  
CMF C12 H4 Cl2 F6 N4 O S

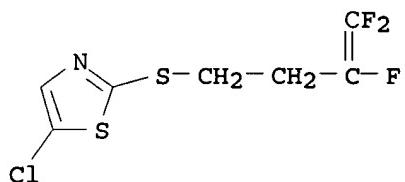


IT 318290-96-9D, mixts. with insecticides 318290-97-0D,  
mixts. with insecticides 318290-98-1D, mixts. with insecticides  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(synergistic nematocidal, insecticidal and acaricidal compns.)

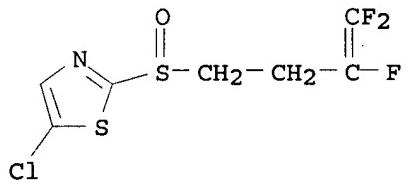
RN 318290-96-9 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



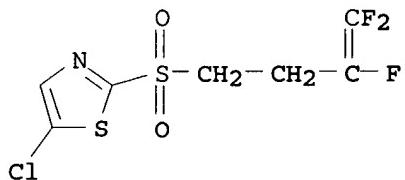
RN 318290-97-0 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 318290-98-1 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:964973 CAPLUS

DOCUMENT NUMBER: 141:390413

TITLE: Synergistic nematocidal, insecticidal, and fungicidal compositions comprising trifluorobutenyl derivatives

INVENTOR(S): Andersch, Wolfram; Wachendorff-Neumann, Ulrike; Kraus, Anton

PATENT ASSIGNEE(S): Bayer Cropscience Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

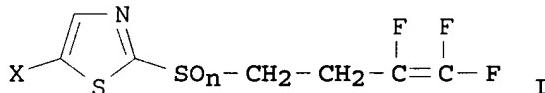
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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EP 1622453	A1	20060208	EP 2004-728352	20040420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
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CN 1812715	A	20060802	CN 2004-80018511	20040420
PRIORITY APPLN. INFO.:			DE 2003-10319591	A 20030502
			WO 2004-EP4165	W 20040420
OTHER SOURCE(S):	MARPAT 141:390413			
GI				

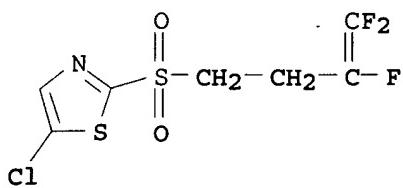


- AB Disclosed are active substance combinations comprising trifluorobutenyl derivs. I (X = halo; n = 0,1 or 2) and previously known fungicides. The active substance combinations have a very good synergistic fungicidal, nematicidal, insecticidal, and/or acaricidal effect.
- IT 785816-64-0 785816-66-2 785816-68-4  
 785816-69-5 785816-71-9 785816-72-0  
 785816-74-2 785816-76-4 785816-77-5  
 785816-79-7
- RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
 (synergistic nematocidal, insecticidal, and fungicidal composition)
- RN 785816-64-0 CAPLUS
- CN 3H-1,2,4-Triazole-3-thione, 2-[2-(1-chlorocyclopropyl)-3-(2-chlorophenyl)-2-hydroxypropyl]-1,2-dihydro-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

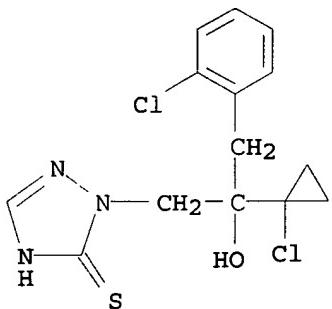
CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 178928-70-6  
CMF C14 H15 Cl2 N3 O S

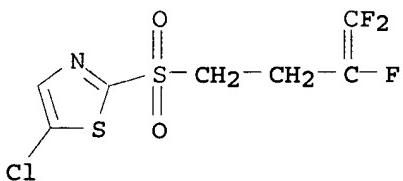


RN 785816-66-2 CAPLUS

CN 1H-Pyrrole-3-carbonitrile, 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-, mixt.  
with 5-chloro-2-[{(3,4,4-trifluoro-3-butenyl)sulfonyl}thiazole (9CI) (CA  
INDEX NAME)

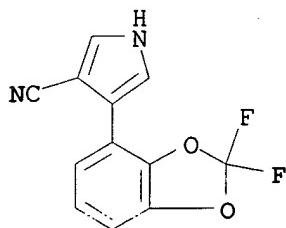
CM 1

CRN 318290-98-1  
CMF C7 H5 C1 F3 N O2 S2



CM 2

CRN 131341-86-1  
CMF C12 H6 F2 N2 O2



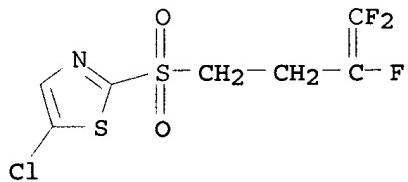
RN 785816-68-4 CAPLUS

CN Benzeneacetic acid,  $\alpha$ -(methoxyimino)-2-[[[(E)-[1-[3-(trifluoromethyl)phenyl]ethylidene]amino]oxy]methyl]-, methyl ester, ( $\alpha$ E)-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2

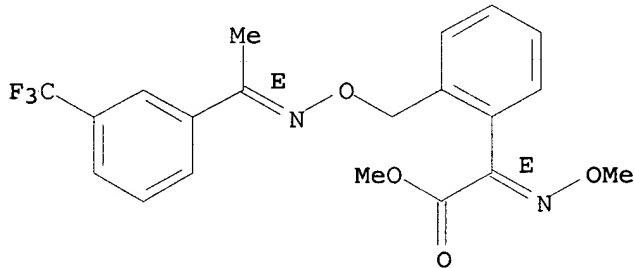


CM 2

CRN 141517-21-7

CMF C20 H19 F3 N2 O4

Double bond geometry as shown.



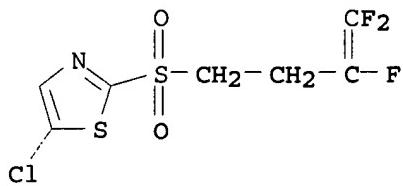
RN 785816-69-5 CAPLUS

CN Urea, N-[(4-chlorophenyl)methyl]-N-cyclopentyl-N'-phenyl-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

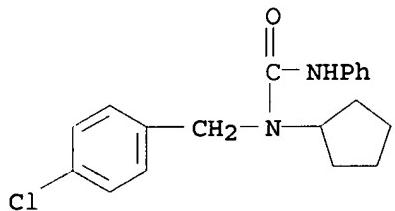
CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2



CM 2

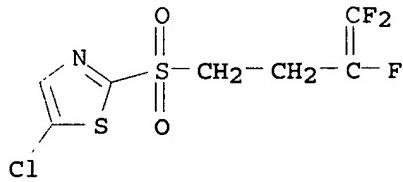
CRN 66063-05-6  
CMF C19 H21 Cl N2 O



RN 785816-71-9 CAPLUS  
CN Phosphonic acid, monoethyl ester, aluminum salt, mixt. with  
5-chloro-2-[(3,4,4-trifluoro-3-butensulfonyl)thiazole (9CI) (CA INDEX  
NAME)

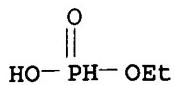
CM 1

CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 39148-24-8  
CMF C2 H7 O3 P . 1/3 Al



●1/3 Al

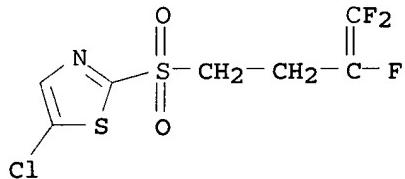
RN 785816-72-0 CAPLUS

CN Methanesulfenamide, 1,1-dichloro-N-[(dimethylamino)sulfonyl]-1-fluoro-N-(4-methylphenyl)-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

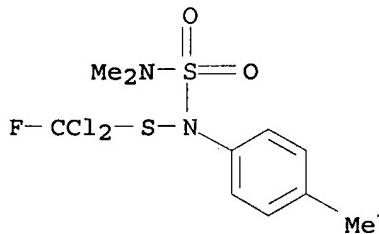
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 731-27-1

CMF C10 H13 Cl2 F N2 O2 S2



RN 785816-74-2 CAPLUS

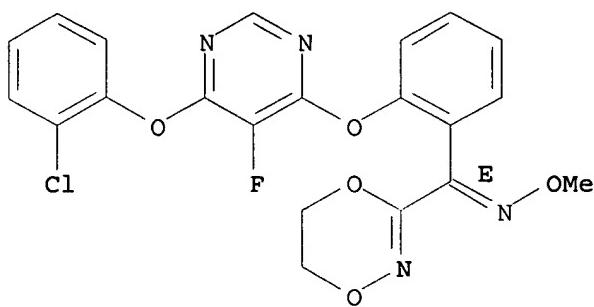
CN Methanone, [2-[[6-(2-chlorophenoxy)-5-fluoro-4-pyrimidinyl]oxy]phenyl] (5,6-dihydro-1,4,2-dioxazin-3-yl)-, O-methyloxime, (1E)-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 361377-29-9

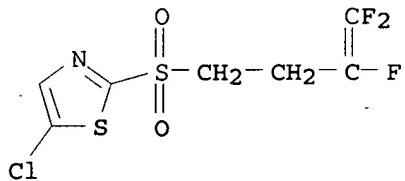
CMF C21 H16 Cl F N4 O5

Double bond geometry as shown.



CM 2

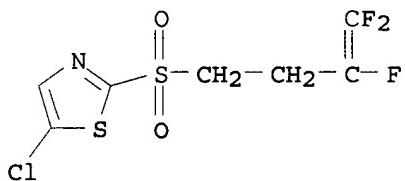
CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



RN 785816-76-4 CAPLUS  
CN 1H-1,2,4-Triazole-1-ethanol,  $\alpha$ -[2-(4-chlorophenyl)ethyl]- $\alpha$ -(1,1-dimethylethyl)-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

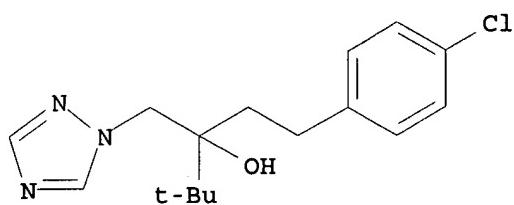
CM 1

CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 107534-96-3  
CMF C16 H22 Cl N3 O



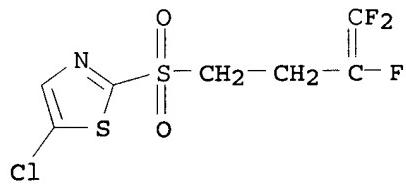
RN 785816-77-5 CAPLUS

CN 1H-Imidazole-1-carboxamide, N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

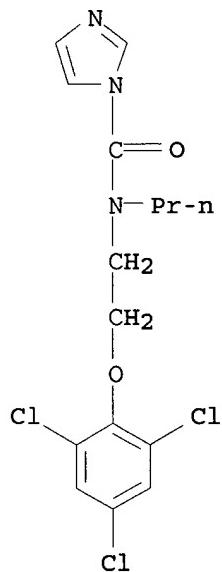
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 67747-09-5

CMF C15 H16 Cl3 N3 O2



RN 785816-79-7 CAPLUS

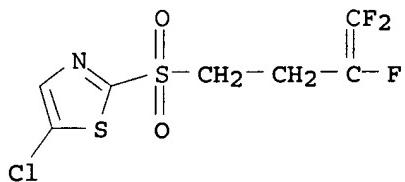
10518454.trn

CN 1-Imidazolidinecarboxamide, 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

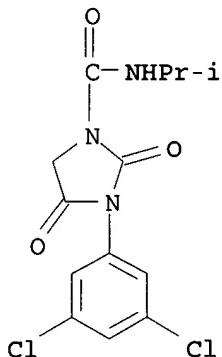
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 36734-19-7

CMF C13 H13 Cl2 N3 O3

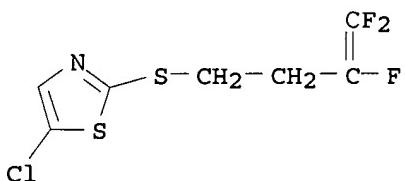


IT 318290-96-9D, mixts. with fungicides 318290-97-0D,  
mixts. with fungicides 318290-98-1D, mixts. with fungicides  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(synergistic nematocidal, insecticidal, and fungicidal compns.)

RN 318290-96-9 CAPLUS

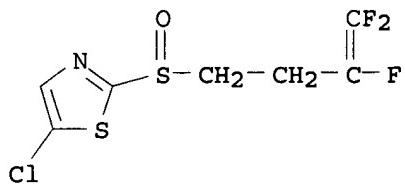
CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



RN 318290-97-0 CAPLUS

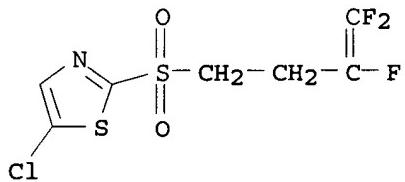
10518454.trn

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 318290-98-1 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:450537 CAPLUS

DOCUMENT NUMBER: 140:419319

TITLE: Heterocyclic fluoralkenyl thioether herbicides

INVENTOR(S): Drewes, Mark Wilhelm; Andersch, Wolfram; Dauck, Hartwig; Goto, Toshio; Shirakura, Shinichi; Nakamura, Shin

PATENT ASSIGNEE(S): Bayer Cropscience Ag, Germany

SOURCE: Ger. Offen., 28 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10254876	A1	20040603	DE 2002-10254876	20021125
PRIORITY APPLN. INFO.:			DE 2002-10254876	20021125

OTHER SOURCE(S): MARPAT 140:419319

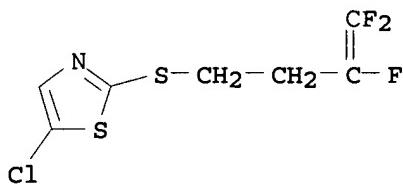
AB The title compds. R<sub>1</sub>S(=O)mCH<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>CR:CF<sub>2</sub> [m = 0, 1 or 2; n = 1-13; R = H or halo; R<sub>1</sub> (un)substituted heterocycl] are herbicides.

IT 318290-96-9 318290-97-0 318290-98-1

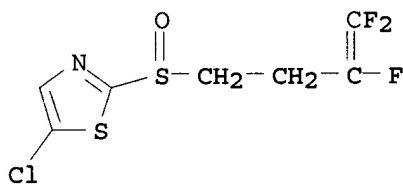
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses (herbicide))

RN 318290-96-9 CAPLUS

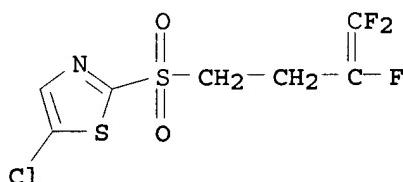
CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 318290-97-0 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 318290-98-1 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:41453 CAPLUS  
 DOCUMENT NUMBER: 140:94039  
 TITLE: Method for producing heterocyclic  
       fluoroalkenylsulfones especially 5-chloro-2-[(3,4,4-  
       trifluoro-3-butenyl)sulfonyl]-1,3-thiazole  
 INVENTOR(S): Straub, Alexander  
 PATENT ASSIGNEE(S): Bayer CropScience AG, Germany  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004005268	A1	20040115	WO 2003-EP6511	20030620
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,				

PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 DE 10229776 A1 20040122 DE 2002-10229776 20020703  
 AU 2003245974 A1 20040123 AU 2003-245974 20030620  
 EP 1519928 A1 20050406 EP 2003-738072 20030620  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 CN 1665795 A 20050907 CN 2003-815722 20030620  
 JP 2005537249 T2 20051208 JP 2004-518547 20030620  
 US 2006004196 A1 20060105 US 2005-518454 20050801  
 DE 2002-10229776 A 20020703  
 WO 2003-EP6511 W 20030620

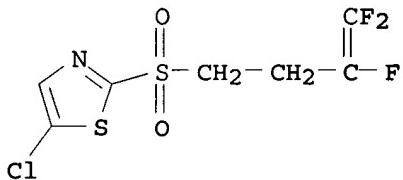
PRIORITY APPLN. INFO.:

OTHER SOURCE(S): CASREACT 140:94039; MARPAT 140:94039

AB HetSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CR<sub>1</sub>:CF<sub>2</sub> and HetS(:O)CH<sub>2</sub>CH<sub>2</sub>CR<sub>1</sub>:CF<sub>2</sub> [Het = (substituted) 5-6 membered condensed heterocyclyl; R<sub>1</sub> = H, F], were prepared by oxidation of HetSCH<sub>2</sub>CH<sub>2</sub>CR<sub>1</sub>:CF<sub>2</sub> (Het and R<sub>1</sub> as above) with a salt of H<sub>2</sub>SO<sub>5</sub> in the presence of an auxiliary agent and diluent. Oxidation of 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfanyl]-1,3-thiazole in MeOH with Oxone in H<sub>2</sub>O gave 92,2% 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-1,3-thiazole.

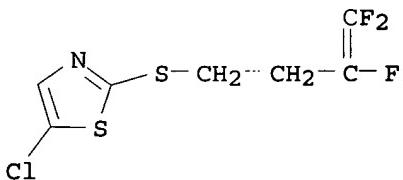
IT 318290-98-1P  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (method for producing heterocyclic fluoroalkenylsulfones especially chloro[(trifluorobutenyl)sulfonyl]thiazole)

RN 318290-98-1 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



IT 318290-96-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (method for producing heterocyclic fluoroalkenylsulfones especially chloro[(trifluorobutenyl)sulfonyl]thiazole)

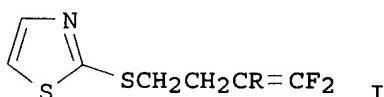
RN 318290-96-9 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:570971 CAPLUS  
 DOCUMENT NUMBER: 139:133556  
 TITLE: Method for producing halogenated 2-(3-butenylthio)-1,3-thiazoles  
 INVENTOR(S): Straub, Alexander  
 PATENT ASSIGNEE(S): Bayer CropScience AG, Germany  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003059896	A1	20030724	WO 2003-EP28	20030103
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10201238	A1	20030724	DE 2002-10201238	20020115
AU 2003212206	A1	20030730	AU 2003-212206	20030103
EP 1467980	A1	20041020	EP 2003-708046	20030103
EP 1467980	B1	20050727		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005519896	T2	20050707	JP 2003-560000	20030103
AT 300527	E	20050815	AT 2003-708046	20030103
ES 2246467	T3	20060216	ES 2003-3708046	20030103
US 2005124816	A1	20050609	US 2005-501115	20050126
US 7078527	B2	20060718		
US 2006183914	A1	20060817	US 2006-403514	20060413
US 2006183915	A1	20060817	US 2006-403743	20060413
PRIORITY APPLN. INFO.:			DE 2002-10201238	A 20020115
			WO 2003-EP28	W 20030103
			US 2005-501115	A3 20050126
OTHER SOURCE(S): GI				



AB Title compds. (I; R = H, F), were prepared in following steps (1) preparing F2C:CRCH2CH2SCN (II; R as above) by reacting F2C:CRCH2CH2X (R as above, X = Br, Cl, mesylate, tosylate) with M+SCN- (M+ = H, NH+, tetraalkylammonium, alkaline (earth) ion) in the presence of a reaction aid and a solvent, (2) treatment of II with H2S or salts thereof in the presence of a reaction aid and a solvent to give F2C:CRCH2CH2S(:NH)SH (III; R as above), and (3) reacting III with MeCHO, ClCH2CHO, or chloroacetaldehyde dialkylacetal in a solvent to give I. Thus, NH4NCS in EtOH was stirred with 4-bromo-1,1,2-trifluoro-1-butene for 2 h at room temperature to give 93.3% 3,4,4-trifluoro-3-butenylthiocyanate. The latter and Et3N in t-BuOMe were treated with H2S followed by stirring over night at room temperature to give 88.5% 3,4,4-trifluoro-3-butenyldithiocarbamate which was treated with concentrated HCl and 45% ClCH2CHO in dioxane followed by boiling for 4 h whereby ClCH2CHO was again added after 2 h to give 94.4% 2-[(3,4,4-trifluoro-3-butenyl)thio]-1,3-thiazole. I are important intermediates for producing pesticides.

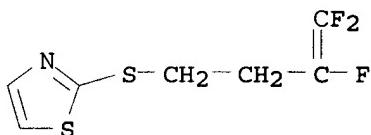
IT 109993-23-9P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(method for producing halogenated (butenylthio)thiazoles)

RN 109993-23-9 CAPLUS

CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:472309 CAPLUS

DOCUMENT NUMBER: 139:18622

TITLE: Preparation of nematocidal trifluorobut enyl imidazolyl thioether derivatives

INVENTOR(S): Watanabe, Yukiyoshi; Ishikawa, Koichi; Otsu, Yuichi; Shibuya, Katsuhiko; Abe, Takahisa

PATENT ASSIGNEE(S): Bayer CropScience AG, Germany

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

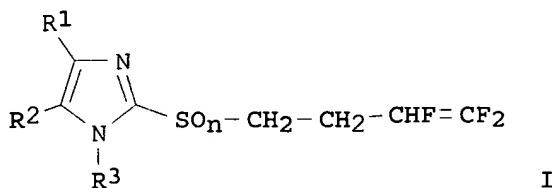
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003049541	A2	20030619	WO 2002-EP13608	20021202
WO 2003049541	A3	20040812		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,			

KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 JP 2003192675 A2 20030709 JP 2001-380152 20011213  
 CA 2469241 AA 20030619 CA 2002-2469241 20021202  
 AU 2002366542 A1 20030623 AU 2002-366542 20021202  
 EP 1465490 A2 20041013 EP 2002-804577 20021202  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK  
 BR 2002014953 A 20041130 BR 2002-14953 20021202  
 US 2005080123 A1 20050414 US 2003-498175 20021202  
 US 6930076 B2 20050816  
 JP 2005513044 T2 20050512 JP 2003-550596 20021202  
 PRIORITY APPLN. INFO.: JP 2001-380152 A 20011213  
 WO 2002-EP13608 W 20021202

OTHER SOURCE(S) : MARPAT 139:18622  
 GI



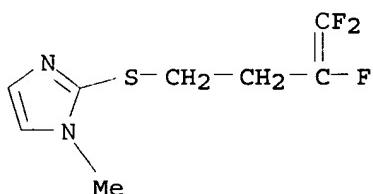
AB The trifluorobutenyl imidazolyl thioether derivs. I (R1 = H or halo; R2 = H, halo or alkoxy carbonyl; R3 = H, alkyl, alkenyl, cycloalkyl or aralkyl; n = 0, 1 or 2) are prepared as nematocides.

IT 539850-80-1P 539850-81-2P 539850-82-3P  
 539850-83-4P 539850-84-5P 539850-85-6P  
 539850-86-7P 539850-87-8P 539850-88-9P  
 539850-89-0P 539850-90-3P 539850-91-4P  
 539850-92-5P 539850-93-6P 539850-94-7P  
 539850-95-8P 539850-96-9P 539850-97-0P  
 539850-98-1P

RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation as nematocide)

RN 539850-80-1 CAPLUS

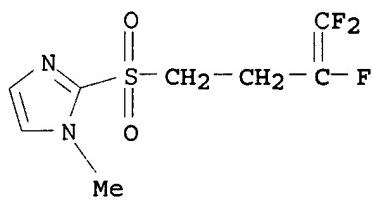
CN 1H-Imidazole, 1-methyl-2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



RN 539850-81-2 CAPLUS

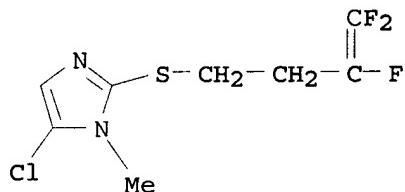
CN 1H-Imidazole, 1-methyl-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]- (9CI) (CA INDEX NAME)

INDEX NAME)



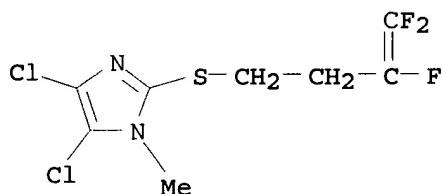
RN 539850-82-3 CAPLUS

CN 1H-Imidazole, 5-chloro-1-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



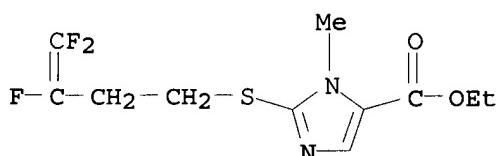
RN 539850-83-4 CAPLUS

CN 1H-Imidazole, 4,5-dichloro-1-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-  
(9CI) (CA INDEX NAME)



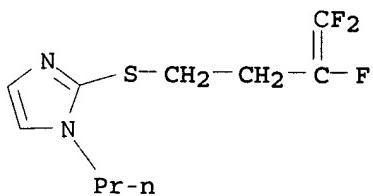
RN 539850-84-5 CAPLUS

CN 1H-Imidazole-5-carboxylic acid, 1-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-, ethyl ester (9CI) (CA INDEX NAME)

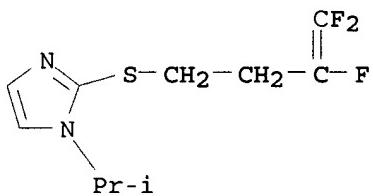


RN 539850-85-6 CAPLUS

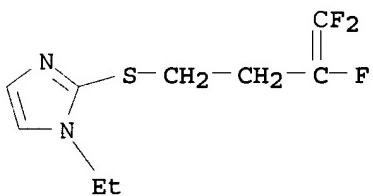
CN 1H-Imidazole, 1-propyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



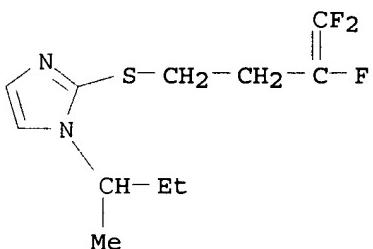
RN 539850-86-7 CAPLUS  
CN 1H-Imidazole, 1-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



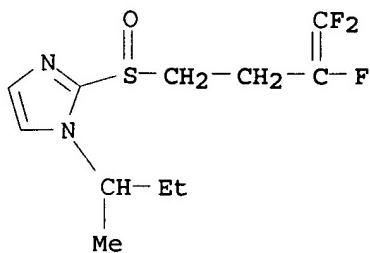
RN 539850-87-8 CAPLUS  
CN 1H-Imidazole, 1-ethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 539850-88-9 CAPLUS  
CN 1H-Imidazole, 1-(1-methylpropyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

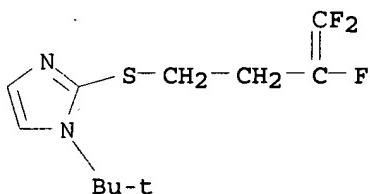


RN 539850-89-0 CAPLUS  
CN 1H-Imidazole, 1-(1-methylpropyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



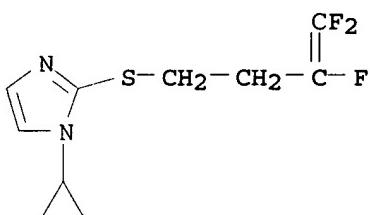
RN 539850-90-3 CAPLUS

CN 1H-Imidazole, 1-(1,1-dimethylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio] - (9CI) (CA INDEX NAME)



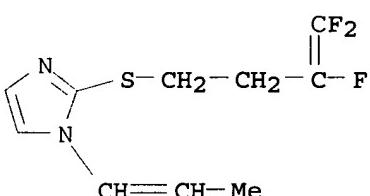
RN 539850-91-4 CAPLUS

CN 1H-Imidazole, 1-cyclopropyl-2-[(3,4,4-trifluoro-3-butenyl)thio] - (9CI) (CA INDEX NAME)



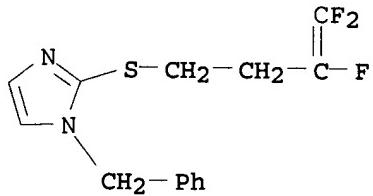
RN 539850-92-5 CAPLUS

CN 1H-Imidazole, 1-(1-propenyl)-2-[(3,4,4-trifluoro-3-butenyl)thio] - (9CI) (CA INDEX NAME)



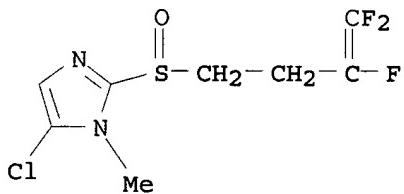
RN 539850-93-6 CAPLUS

CN 1H-Imidazole, 1-(phenylmethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio] - (9CI) (CA INDEX NAME)



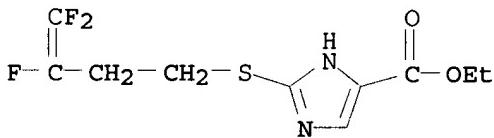
RN 539850-94-7 CAPLUS

CN 1H-Imidazole, 5-chloro-1-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



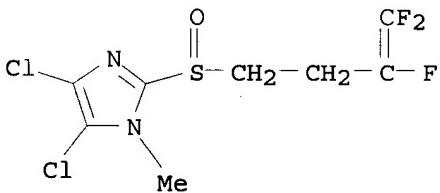
RN 539850-95-8 CAPLUS

CN 1H-Imidazole-4-carboxylic acid, 2-[(3,4,4-trifluoro-3-butenyl)thio]ethyl ester (9CI) (CA INDEX NAME)



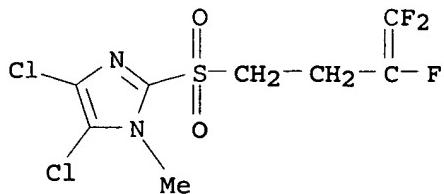
RN 539850-96-9 CAPLUS

CN 1H-Imidazole, 4,5-dichloro-1-methyl-2-[(3,4,4-trifluoro-3-butene-1-sulfonyl)ethoxy]- (9CI) (CA INDEX NAME)



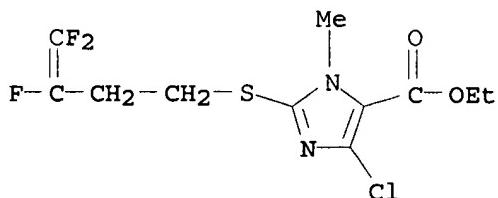
RN 539850-97-0 CAPLUS

CN 1H-Imidazole, 4,5-dichloro-1-methyl-2-[(3,4,4-trifluoro-3-butene-1-sulfonyl)ethoxy]- (9CI) (CA INDEX NAME)



RN 539850-98-1 CAPLUS

CN 1H-Imidazole-5-carboxylic acid, 4-chloro-1-methyl-2-[(3,4,4-trifluoro-3-butene)thio]-, ethyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 8 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:376522 CAPLUS

DOCUMENT NUMBER: 138:350030

TITLE: Preparation of fluorinated thiazolopyridine derivatives as nematocides, acaricides and ecto- and endoparasiticides

INVENTOR(S): Wood, William Wakefield; Kuhn, David; Hu, Yulin;

Tecle, Berhane

PATENT ASSIGNEE(S): BASF AG, Germany

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

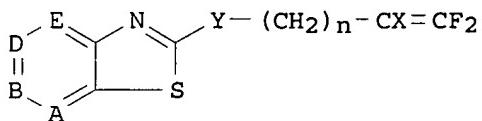
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003039258	A1	20030515	WO 2002-EP10074	20020909
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1427287	A1	20040616	EP 2002-782789	20020909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002012243	A	20041005	BR 2002-12243	20020909
JP 2005507431	T2	20050317	JP 2003-541364	20020909

US 2004254199	A1	20041216	US 2004-488975	20040309
ZA 2004002746	A	20050408	ZA 2004-2746	20040408
PRIORITY APPLN. INFO.:			US 2001-318345P	P 20010910
			WO 2002-EP10074	W 20020909

OTHER SOURCE(S) : MARPAT 138:350030  
GI



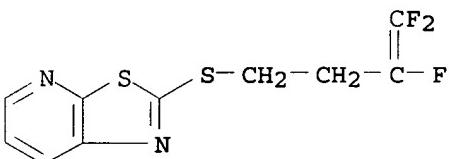
**AB** Prepared are di- and trifluorosubstituted alkene compds. I, wherein X is H or F; Y is O, NR<sub>1</sub> or S(O)<sub>m</sub>; R<sub>1</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl; m is 0, 1, or 2; A,B,D and E are selected from the following : (a) A is N and B, D and E are CR<sub>2</sub>; or (b) B is N and A, D and E are CR<sub>2</sub>; or (c) D is N and A, B, and E are CR<sub>2</sub>; or (d) A and D are N and B and E are CR<sub>2</sub>; or (e) B and E are N and A and D are CR<sub>2</sub>; R<sub>2</sub> is H, halo, NH<sub>2</sub>, NO<sub>2</sub>, CN, alkyl, haloalkyl, alkenyl, alkoxy, haloalkoxy, alkylthio, haloalkylthio, alkylsulfinyl, haloalkylsulfinyl, alkylsulfonyl, haloalkylsulfonyl, aminosulfonyl, alkoxyalkyl, alkylthioalkyl, alkylsulfinylalkyl, alkylsulfonylalkyl, alkylaminoalkyl, dialkylaminoalkyl, hydroxycarbonyl, or alkoxy carbonyl; or Ph which may be substituted with halogen, CN, NO<sub>2</sub>, alkyl, haloalkyl, alkoxy, or haloalkoxy; or a 5- to 6-membered heteroarom. ring system containing 1 to 3 heteroatoms selected from O, S and N, which may be substituted with halogen, CN, NO<sub>2</sub>, alkyl, haloalkyl, alkoxy, or haloalkoxy; n is 1, 2, 3 or 4, and their agriculturally and/or physiol. tolerable salts. I are useful to control nematodes and arachnids, and for treating, controlling, preventing and protecting warm-blooded animals, fish and humans against infestation and infection by helminths, arachnids and arthropod endo- and ectoparasites.

**IT** 521092-75-1P 521092-76-2P 521092-77-3P  
521092-78-4P 521092-79-5P

RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation as nematocide, acaricide and ecto- and endoparasiticide)

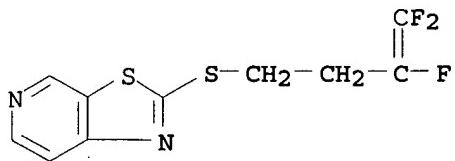
**RN** 521092-75-1 CAPLUS

**CN** Thiazolo[5,4-b]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

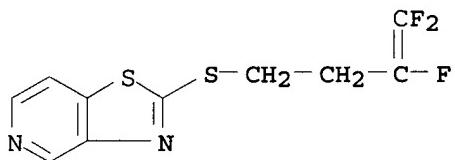


**RN** 521092-76-2 CAPLUS

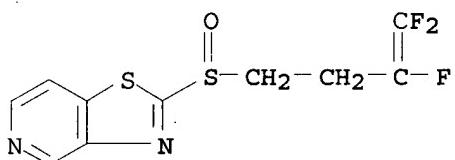
**CN** Thiazolo[5,4-c]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



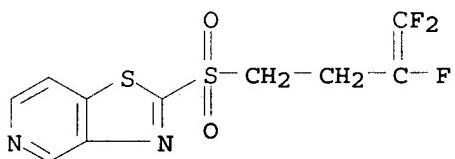
RN 521092-77-3 CAPLUS  
 CN Thiazolo[4,5-c]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 521092-78-4 CAPLUS  
 CN Thiazolo[4,5-c]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



RN 521092-79-5 CAPLUS  
 CN Thiazolo[4,5-c]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:282551 CAPLUS  
 DOCUMENT NUMBER: 138:304270  
 TITLE: Preparation of nematocidal trifluorobutenylthio(or sulfinyl/sulfonyl) thiazoles  
 INVENTOR(S): Watanabe, Yukiyoshi; Ishikawa, Koichi; Otsu, Yuich; Shibuya, Katsuhiko  
 PATENT ASSIGNEE(S): Bayer CropScience AG, Germany  
 SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

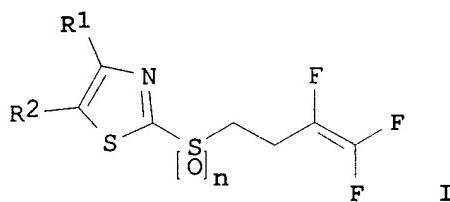
English

FAMILY ACC. NUM. COUNT:

1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003029231	A1	20030410	WO 2002-EP10351	20020916
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003113168	A2	20030418	JP 2001-301316	20010928
PRIORITY APPLN. INFO.:			JP 2001-301316	A 20010928
OTHER SOURCE(S):	MARPAT 138:304270			
GI				

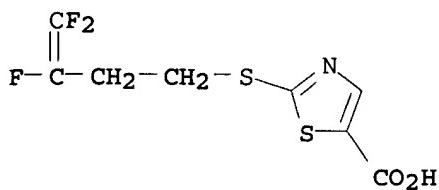


AB The title compds. [I; R1 = H, halo, alkyl, haloalkyl, cycloalkyl, alkoxy carbonylmethyl; R2 = H, halo, alkyl, alkoxyalkyl, alkylthioalkyl, carboxy, alkylaminocarbonyl, cycloalkylaminocarbonyl, dialkylaminocarbonyl, alkoxy carbonyl; n = 0-2; with the proviso that R1 and R2 do not represent hydrogen at the same time, and in case R1 represents hydrogen, then R2 does not represent halogen], useful as nematocides, were prepared. Thus, reacting 5-ethoxycarbonyl-2-mercaptop-4-methylthiazole with 4-bromo-1,1,2-trifluoro-1-butene in the presence of K2CO3 in MeCN afforded 65% I [R1 = Me; R2 = CO2Et; n = 0]. Seven of the prepared compds. I showed more than 90% controlling effect at 10 ppm in test for Meloidogyne spp. (soil pot test).

IT 508179-54-2P 508179-77-9P  
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (preparation of nematicidal trifluorobutenylthio(or sulfinyl/sulfonyl) thiazoles)

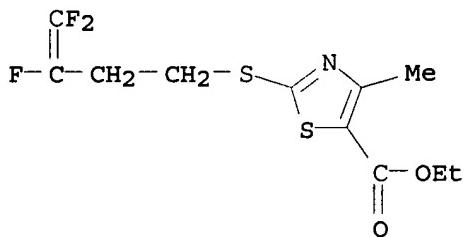
RN 508179-54-2 CAPLUS

CN 5-Thiazolecarboxylic acid, 2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



RN 508179-77-9 CAPLUS

CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-, ethyl ester (9CI) (CA INDEX NAME)



IT 508179-51-9P 508179-52-0P 508179-53-1P

508179-55-3P 508179-56-4P 508179-57-5P

508179-58-6P 508179-59-7P 508179-60-0P

508179-61-1P 508179-62-2P 508179-63-3P

508179-64-4P 508179-65-5P 508179-66-6P

508179-68-8P 508179-70-2P 508179-71-3P

508179-73-5P 508179-75-7P 508179-79-1P

508179-81-5P 508179-83-7P 508179-85-9P

508179-87-1P 508179-89-3P 508179-91-7P

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508180-03-8P 508180-05-0P 508180-07-2P

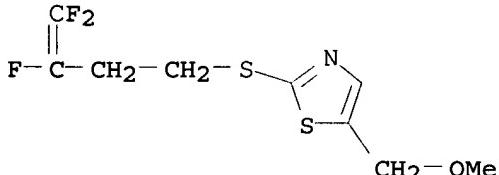
508180-09-4P 508180-10-7P 508180-12-9P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of nematicidal trifluorobutenylthio(or sulfinyl/sulfonyl) thiazoles)

RN 508179-51-9 CAPLUS

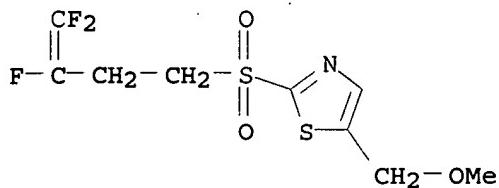
CN Thiazole, 5-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 508179-52-0 CAPLUS

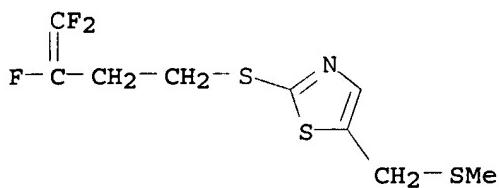
CN Thiazole, 5-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI)

(CA INDEX NAME)



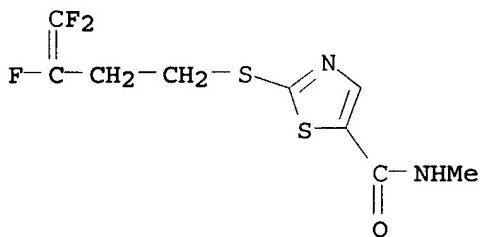
RN 508179-53-1 CAPLUS

CN Thiazole, 5-[(methylthio)methyl]-2-[(3,4,4-trifluoro-3-butenyl)thio]-  
(9CI) (CA INDEX NAME)



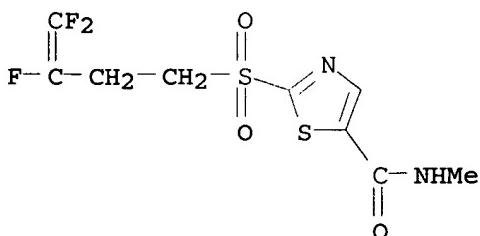
RN 508179-55-3 CAPLUS

CN 5-Thiazolecarboxamide, N-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



RN 508179-56-4 CAPLUS

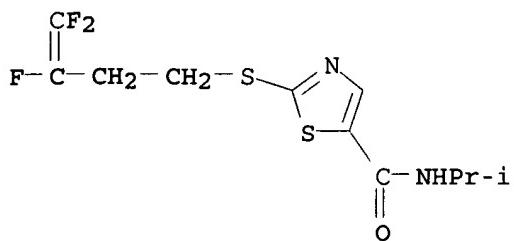
CN 5-Thiazolecarboxamide, N-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-  
(9CI) (CA INDEX NAME)



RN 508179-57-5 CAPLUS

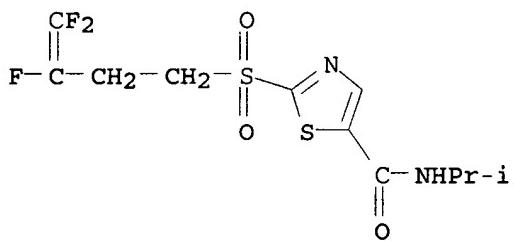
CN 5-Thiazolecarboxamide, N-(1-methylethyl)-2-[(3,4,4-trifluoro-3-

butenyl)thio] - (9CI) (CA INDEX NAME)



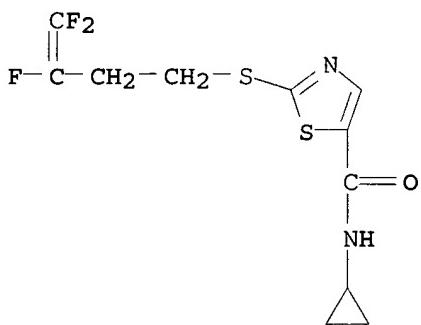
RN 508179-58-6 CAPLUS

CN 5-Thiazolecarboxamide, N-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



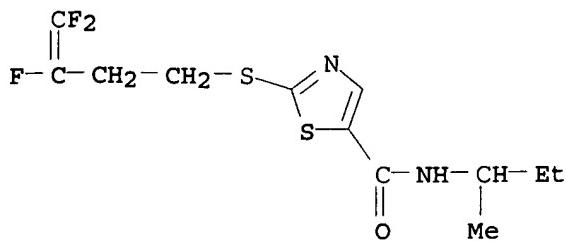
RN 508179-59-7 CAPLUS

CN 5-Thiazolecarboxamide, N-(1-methylpropyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

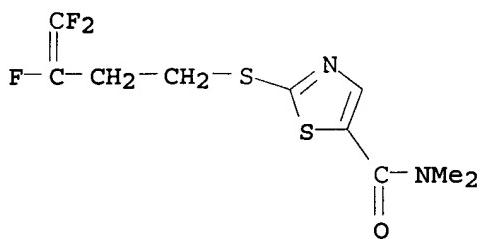


RN 508179-60-0 CAPLUS

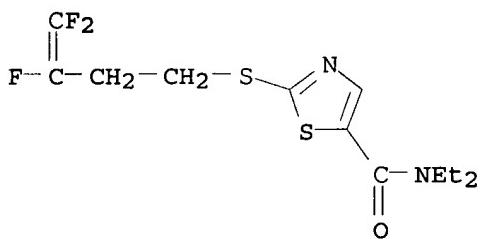
CN 5-Thiazolecarboxamide, N-(1-methylpropyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



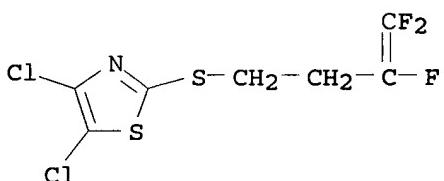
RN 508179-61-1 CAPLUS  
CN 5-Thiazolecarboxamide, N,N-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-  
(9CI) (CA INDEX NAME)



RN 508179-62-2 CAPLUS  
CN 5-Thiazolecarboxamide, N,N-diethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-  
(9CI) (CA INDEX NAME)

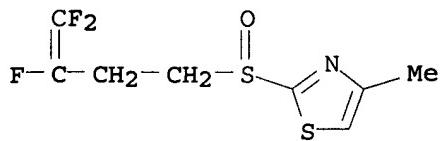


RN 508179-63-3 CAPLUS  
CN Thiazole, 4,5-dichloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

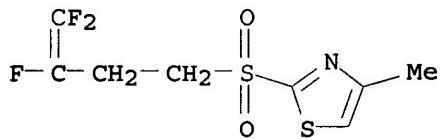


RN 508179-64-4 CAPLUS  
CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA

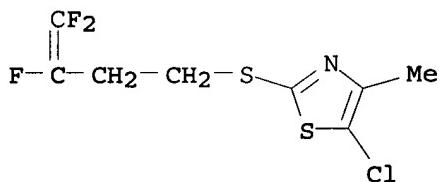
INDEX NAME)



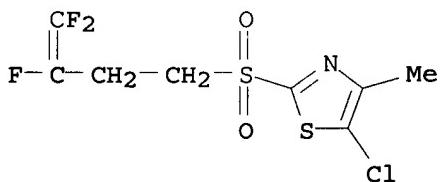
RN 508179-65-5 CAPLUS  
CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



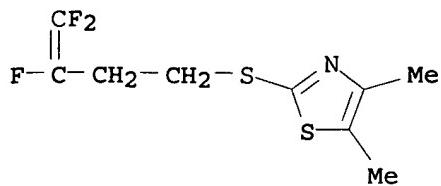
RN 508179-66-6 CAPLUS  
CN Thiazole, 5-chloro-4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



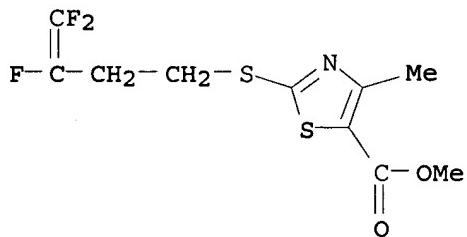
RN 508179-68-8 CAPLUS  
CN Thiazole, 5-chloro-4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



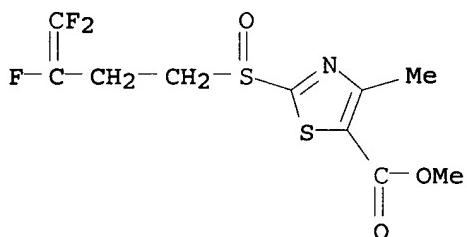
RN 508179-70-2 CAPLUS  
CN Thiazole, 4,5-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



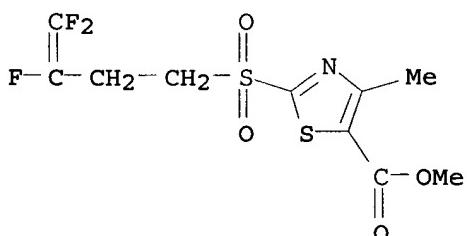
RN 508179-71-3 CAPLUS  
CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-, methyl ester (9CI) (CA INDEX NAME)



RN 508179-73-5 CAPLUS  
CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]-, methyl ester (9CI) (CA INDEX NAME)

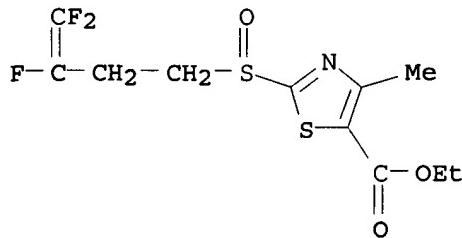


RN 508179-75-7 CAPLUS  
CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



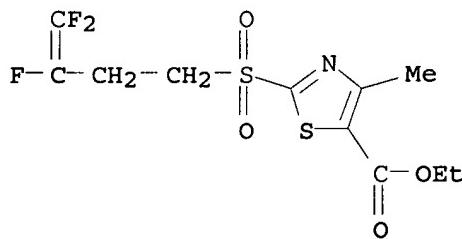
RN 508179-79-1 CAPLUS  
CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-

butenyl)sulfinyl]-, ethyl ester (9CI) (CA INDEX NAME)



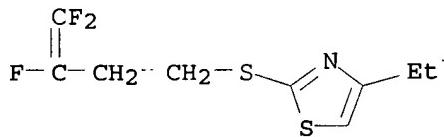
RN 508179-81-5 CAPLUS

CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-but enyl)sulfinyl]-, ethyl ester (9CI) (CA INDEX NAME)



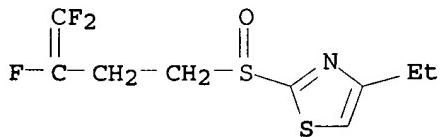
RN 508179-83-7 CAPLUS

CN Thiazole, 4-ethyl-2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



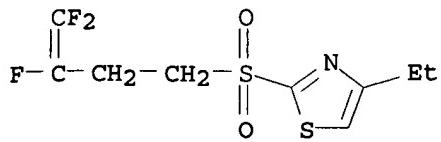
RN 508179-85-9 CAPLUS

CN Thiazole, 4-ethyl-2-[(3,4,4-trifluoro-3-but enyl)sulfinyl]- (9CI) (CA INDEX NAME)

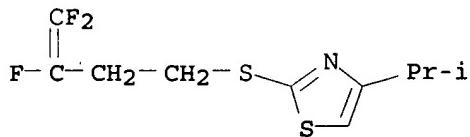


RN 508179-87-1 CAPLUS

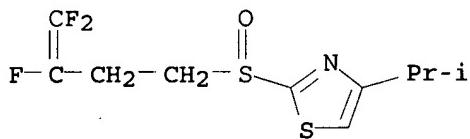
CN Thiazole, 4-ethyl-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]- (9CI) (CA INDEX NAME)



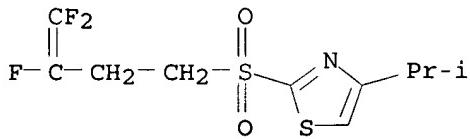
RN 508179-89-3 CAPLUS  
CN Thiazole, 4-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



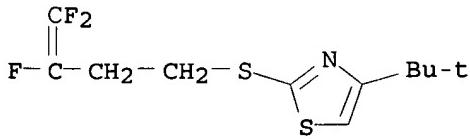
RN 508179-91-7 CAPLUS  
CN Thiazole, 4-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI)  
(CA INDEX NAME)



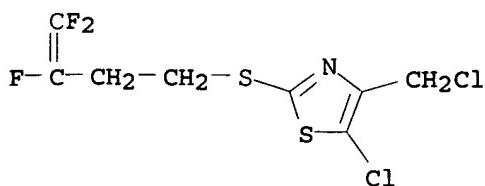
RN 508179-92-8 CAPLUS  
CN Thiazole, 4-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI)  
(CA INDEX NAME)



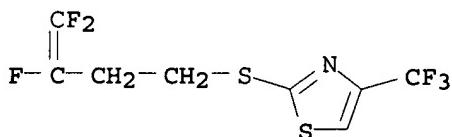
RN 508179-94-0 CAPLUS  
CN Thiazole, 4-(1,1-dimethylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



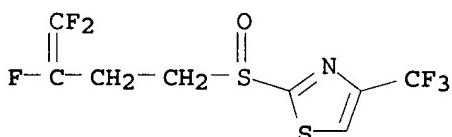
RN 508179-96-2 CAPLUS  
CN Thiazole, 5-chloro-4-(chloromethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



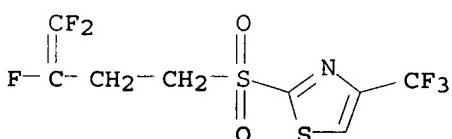
RN 508179-98-4 CAPLUS  
CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]-4-(trifluoromethyl)- (9CI)  
(CA INDEX NAME)



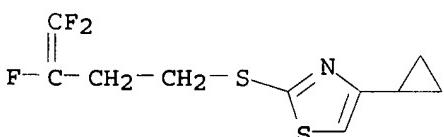
RN 508179-99-5 CAPLUS  
CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]-4-(trifluoromethyl)-  
(9CI) (CA INDEX NAME)



RN 508180-01-6 CAPLUS  
CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-4-(trifluoromethyl)-  
(9CI) (CA INDEX NAME)

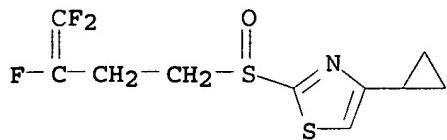


RN 508180-03-8 CAPLUS  
CN Thiazole, 4-cyclopropyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



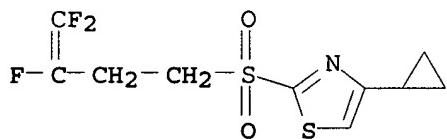
RN 508180-05-0 CAPLUS  
CN Thiazole, 4-cyclopropyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI)

(CA INDEX NAME)



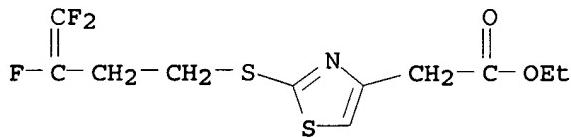
RN 508180-07-2 CAPLUS

CN Thiazole, 4-cyclopropyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI)  
(CA INDEX NAME)



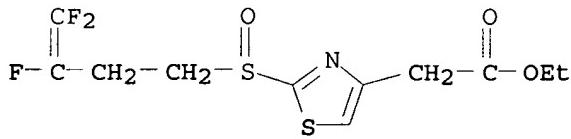
RN 508180-09-4 CAPLUS

CN 4-Thiazoleacetic acid, 2-[(3,4,4-trifluoro-3-butene)thio]-, ethyl ester  
(9CI) (CA INDEX NAME)



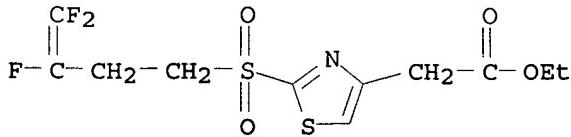
RN 508180-10-7 CAPLUS

CN 4-Thiazoleacetic acid, 2-[(3,4,4-trifluoro-3-butene)sulfonyl]-, ethyl  
ester (9CI) (CA INDEX NAME)



RN 508180-12-9 CAPLUS

CN 4-Thiazoleacetic acid, 2-[(3,4,4-trifluoro-3-butene)sulfonyl]-, ethyl  
ester (9CI) (CA INDEX NAME)



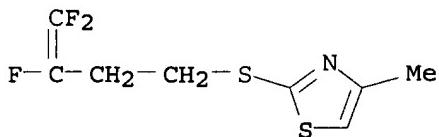
IT 27540-22-3 109993-23-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of nematicidal trifluorobutenylthio(or sulfinyl/sulfonyl) thiazoles)

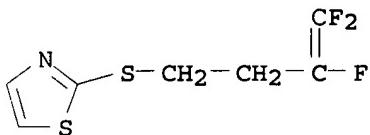
RN 27540-22-3 CAPLUS

CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-but enyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 109993-23-9 CAPLUS

CN Thiazole, 2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:58093 CAPLUS

DOCUMENT NUMBER: 138:106691

TITLE: Preparation of thiazolo[4,5-b]pyridines as fungicides

INVENTOR(S): Cuccia, Salvatore; Haley, Gregory J.; Barnes, Keith D.; Wood, William W.; Hu, Yulin; Cotter, Henry Van Tuyl; Gypser, Andreas; Schwoegler, Anja

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany; Ferguson, Kathryn C.

SOURCE: PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003006470	A2	20030123	WO 2002-EP7752	20020711
WO 2003006470	A3	20030410		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2003083311	A1	20030501	US 2001-902783	20010712
US 6914068	B2	20050705		
EP 1416798	A2	20040512	EP 2002-764678	20020711

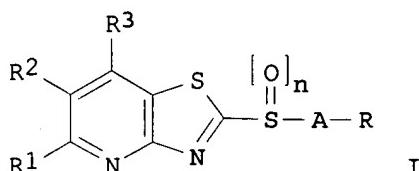
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IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

CN 1553773 A 20041208 CN 2002-817759 20020711  
JP 2004538279 T2 20041224 JP 2003-512240 20020711

PRIORITY APPLN. INFO.: US 2001-902783 A 20010712  
WO 2002-EP7752 W 20020711

OTHER SOURCE(S): MARPAT 138:106691

GI



AB The title compds. [I; n = 0-2; R1-R3 = H, halo, alkyl, etc.; R = H, CN, halo, etc.; A = alkylene; AR = dihalomethyl, trihalomethyl, alkenyl, etc.], were prepared. Thus, bromination of 2-amino-5-chloropyridine followed by reacting the resulting 2-amino-3-bromo-5-chloropyridine with O-ethylxanthic acid potassium salt, alkylation of 6-chloro-2-mercaptopthiazolo[4,5-b]pyridine with allyl bromide, and oxidation of the corresponding 3-allylthio derivative with H<sub>2</sub>O<sub>2</sub> afforded I [n = 1; R1, R3 = H; R2 = Cl; AR = CH<sub>2</sub>CH:CH<sub>2</sub>] which showed 100% control against grape downy mildew (*Plasmopara viticola*) at 200 ppm. A method for controlling harmful fungi, which comprises treating the fungi or the materials, plants, the soil or the seed to be protected against fungal attack and/or animal pests with an effective amount of at least one thiazolo[4,5-b]pyridine I, is claimed.

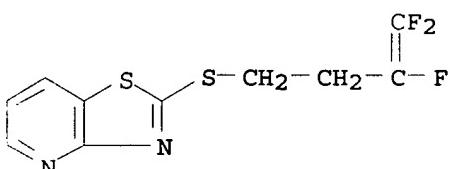
IT 267409-05-2P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of thiazolo[4,5-b]pyridines as fungicides)

RN 267409-05-2 CAPLUS

CN Thiazolo[4,5-b]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 11 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:688564 CAPLUS

DOCUMENT NUMBER: 137:181112

TITLE: Pesticidal and parasiticidal 2-(substituted thio) thiazolo-[4,5-b]pyridine compounds

INVENTOR(S): Wood, William Wakefield

PATENT ASSIGNEE(S): American Cyanamid Company, USA

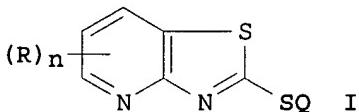
SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6448262	B1	20020910	US 1999-435342	19991105
US 2003069268	A1	20030410	US 2002-165450	20020610
PRIORITY APPLN. INFO.:			US 2000-198595P	P 20000419
			US 1999-435342	A3 19991105

GI

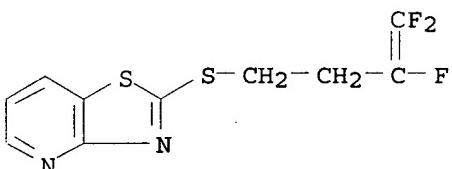


AB 2-(Substituted thio)thiazolo[4,5-b]pyridine compds. I (Markush included) are prepared and used for protection of growing plants from attack or infestation by nematode, insect or acarid pests by applying the compds. to the foliage of the plants, or to the soil or water in which they are growing. The compds. are selected from the group consisting of 2-[(4,4,3-trifluoro-3-butenyl)thio]thiazolo[4,5-b]pyridine, 2-[(bromodifluoromethyl)thio]thiazolo[4,5-b]pyridine, and 2-[(difluoromethyl)thio]thiazolo[4,5-b]pyridine.

IT 267409-05-2P  
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation as pesticide and parasiticide)

RN 267409-05-2 CAPLUS

CN Thiazolo[4,5-b]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:676754 CAPLUS  
 DOCUMENT NUMBER: 135:226985  
 TITLE: Preparation of oxazolyltrifluorobutenes as nematocides  
 INVENTOR(S): Watanabe, Yukiyoshi; Ishikawa, Koichi; Narabu, Shinichi; Gomibuchi, Takuya; Otsu, Yuichi; Shibuya, Katsuhiko  
 PATENT ASSIGNEE(S): Nihon Bayer Agrochem K.K., Japan  
 SOURCE: PCT Int. Appl., 60 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001066529	A1	20010913	WO 2001-IB331	20010308
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2001322988	A2	20011120	JP 2000-240855	20000809
AU 2001035916	A5	20010917	AU 2001-35916	20010308
EP 1263744	A1	20021211	EP 2001-908058	20010308
R: AT, BE, CH, DE, DK, ES, FR, IE, SI, LT, LV, FI, RO, MK,	GB, GR, IT, LI, LU, NL, SE, MC, PT, CY, AL, TR			
BR 2001008989	A	20030603	BR 2001-8989	20010308
JP 2003525930	T2	20030902	JP 2001-565345	20010308
NZ 521227	A	20040227	NZ 2001-521227	20010308
ZA 2002006250	A	20030806	ZA 2002-6250	20020806
US 2003109563	A1	20030612	US 2002-220775	20020905
US 6743814	B2	20040601		
PRIORITY APPLN. INFO.:			JP 2000-64615	A 20000309
			JP 2000-240855	A 20000809
			WO 2001-IB331	W 20010308

OTHER SOURCE(S): MARPAT 135:226985

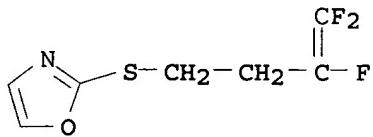
AB RSONCH2CH2CF:CF2 [I; R = (un)substituted 2-oxazolyl; n = 0-2] were prepared. Thus, HOCH2CHO was cyclocondensed with HSCN and the product thioetherified by BrCH2CH2CF:CF2 to give 2-(3,4,4-trifluoro-3-butenylthio)oxazole. Data for biol. activity of I were given.

IT 359631-01-9P 359631-02-0P 359631-03-1P  
 359631-04-2P 359631-05-3P 359631-06-4P  
 359631-07-5P 359631-08-6P 359631-09-7P  
 359631-10-0P 359631-11-1P 359631-12-2P  
 359631-13-3P 359631-14-4P 359631-15-5P  
 359631-16-6P 359631-17-7P 359631-18-8P  
 359631-19-9P 359631-20-2P 359631-21-3P  
 359631-22-4P 359631-23-5P 359631-24-6P  
 359631-25-7P 359631-26-8P 359631-27-9P  
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 359631-31-5P 359631-32-6P 359631-33-7P

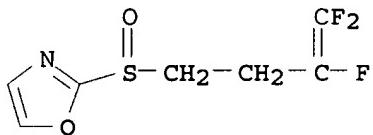
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of oxazolyltrifluorobutenes as nematocides)

RN 359631-01-9 CAPLUS

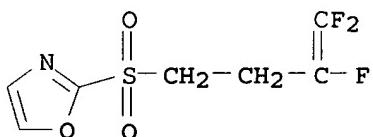
CN Oxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



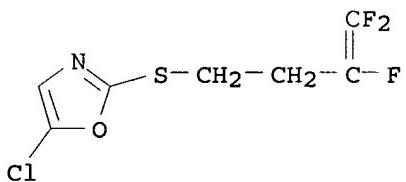
RN 359631-02-0 CAPLUS  
CN Oxazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



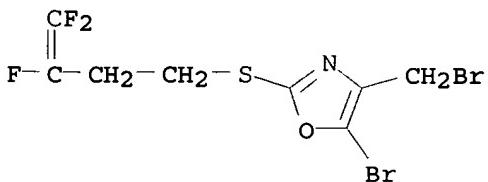
RN 359631-03-1 CAPLUS  
CN Oxazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



RN 359631-04-2 CAPLUS  
CN Oxazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

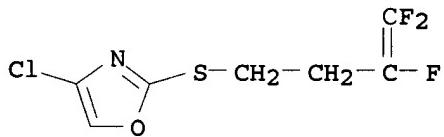


RN 359631-05-3 CAPLUS  
CN Oxazole, 5-bromo-4-(bromomethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



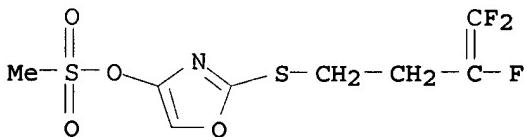
RN 359631-06-4 CAPLUS  
CN Oxazole, 4-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX

NAME)



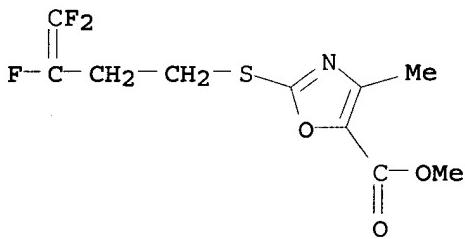
RN 359631-07-5 CAPLUS

CN 4-Oxazolol, 2-[(3,4,4-trifluoro-3-butenyl)thio]-, methanesulfonate (ester)  
(9CI) (CA INDEX NAME)



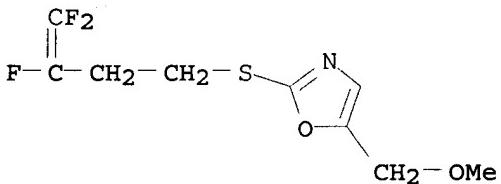
RN 359631-08-6 CAPLUS

CN 5-Oxazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-,  
methyl ester (9CI) (CA INDEX NAME)



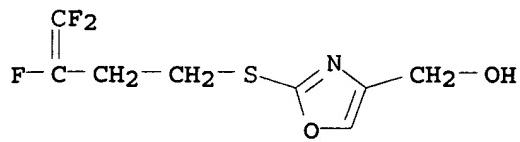
RN 359631-09-7 CAPLUS

CN Oxazole, 5-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA  
INDEX NAME)

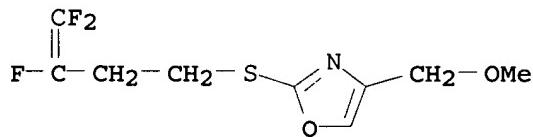


RN 359631-10-0 CAPLUS

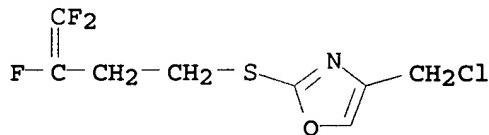
CN 4-Oxazolemethanol, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX  
NAME)



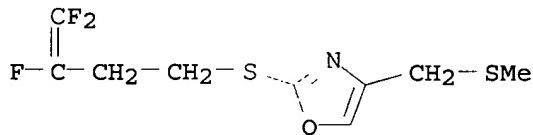
RN 359631-11-1 CAPLUS  
CN Oxazole, 4- (methoxymethyl)-2- [(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



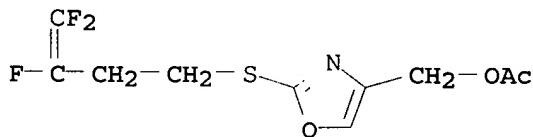
RN 359631-12-2 CAPLUS  
CN Oxazole, 4- (chloromethyl)-2- [(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



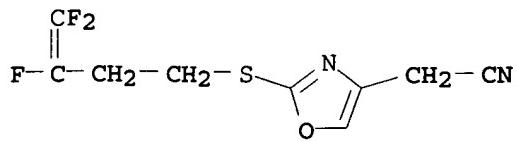
RN 359631-13-3 CAPLUS  
CN Oxazole, 4- [(methylthio)methyl]-2- [(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



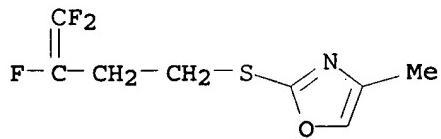
RN 359631-14-4 CAPLUS  
CN 4-Oxazolemethanol, 2- [(3,4,4-trifluoro-3-butenyl)thio]-, acetate (ester)  
(9CI) (CA INDEX NAME)



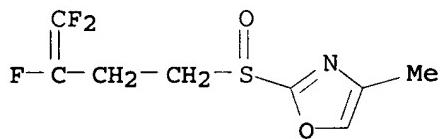
RN 359631-15-5 CAPLUS  
CN 4-Oxazoleacetonitrile, 2- [(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



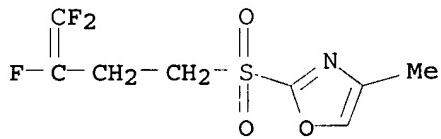
RN 359631-16-6 CAPLUS  
CN Oxazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



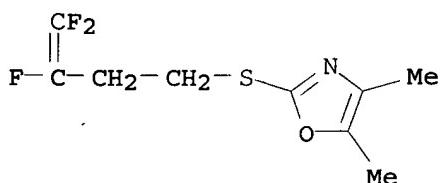
RN 359631-17-7 CAPLUS  
CN Oxazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 359631-18-8 CAPLUS  
CN Oxazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)

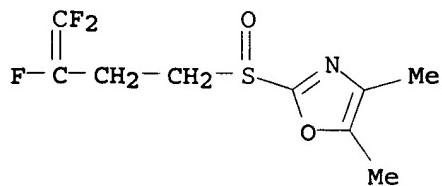


RN 359631-19-9 CAPLUS  
CN Oxazole, 4,5-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



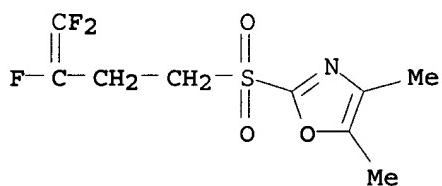
RN 359631-20-2 CAPLUS  
CN Oxazole, 4,5-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

INDEX NAME)



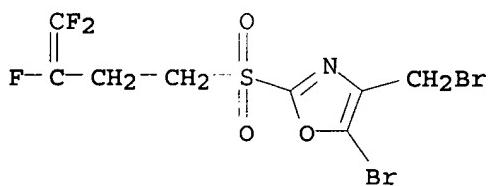
RN 359631-21-3 CAPLUS

CN Oxazole, 4,5-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



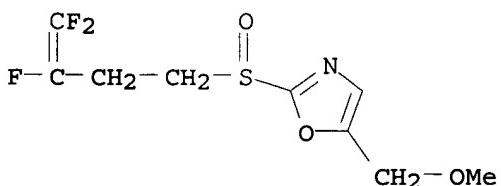
RN 359631-22-4 CAPLUS

CN Oxazole, 5-bromo-4-(bromomethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



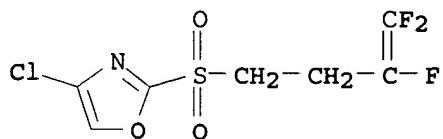
RN 359631-23-5 CAPLUS

CN Oxazole, 5-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

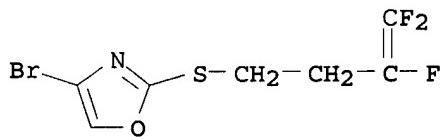


RN 359631-24-6 CAPLUS

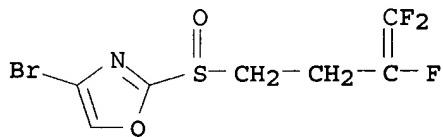
CN Oxazole, 4-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



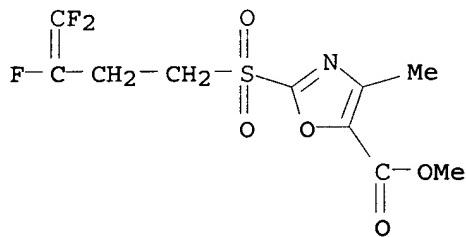
RN 359631-25-7 CAPLUS  
CN Oxazole, 4-bromo-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



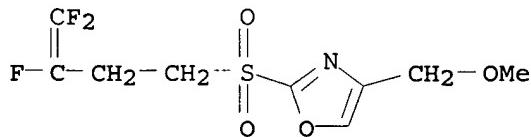
RN 359631-26-8 CAPLUS  
CN Oxazole, 4-bromo-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 359631-27-9 CAPLUS  
CN 5-Oxazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

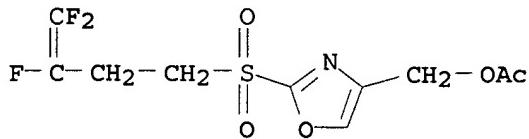


RN 359631-28-0 CAPLUS  
CN Oxazole, 4-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



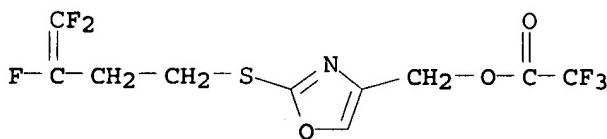
RN 359631-29-1 CAPLUS

CN 4-Oxazolemethanol, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-, acetate  
(ester) (9CI) (CA INDEX NAME)



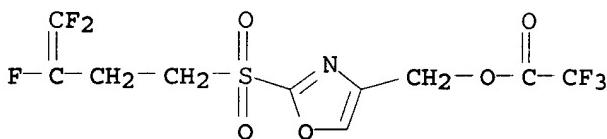
RN 359631-30-4 CAPLUS

CN Acetic acid, trifluoro-, [2-[(3,4,4-trifluoro-3-butenyl)thio]-4-oxazolyl]methyl ester (9CI) (CA INDEX NAME)



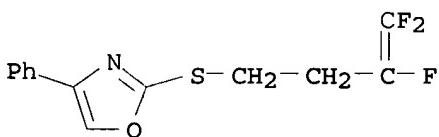
RN 359631-31-5 CAPLUS

CN Acetic acid, trifluoro-, [2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-4-oxazolyl]methyl ester (9CI) (CA INDEX NAME)



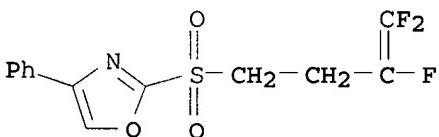
RN 359631-32-6 CAPLUS

CN Oxazole, 4-phenyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 359631-33-7 CAPLUS

CN Oxazole, 4-phenyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)

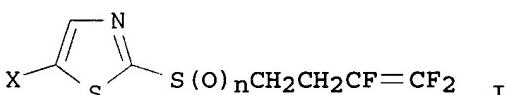


REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:31482 CAPLUS  
 DOCUMENT NUMBER: 134:100860  
 TITLE: Nematocidal trifluorobutenes  
 INVENTOR(S): Watanabe, Yukiyoshi; Ishikawa, Koichi; Otsu, Yuichi;  
 Shibuya, Katsuhiko; Abe, Takahisa  
 PATENT ASSIGNEE(S): Nihon Bayer Agrochem K.K., Japan  
 SOURCE: PCT Int. Appl., 27 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001002378	A1	20010111	WO 2000-IB868	20000628
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2001019685	A2	20010123	JP 1999-191638	19990706
CA 2378148	AA	20010111	CA 2000-2378148	20000628
BR 2000012243	A	20020326	BR 2000-12243	20000628
EP 1200418	A1	20020502	EP 2000-937136	20000628
EP 1200418	B1	20040331		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
TR 200200068	T2	20020521	TR 2002-68	20000628
JP 2003503485	T2	20030128	JP 2001-507816	20000628
AT 263157	E	20040415	AT 2000-937136	20000628
ES 2215671	T3	20041016	ES 2000-937136	20000628
ZA 2001009995	A	20020827	ZA 2001-9995	20011205
US 6734198	B1	20040511	US 2002-30361	20020305
HK 1046403	A1	20050422	HK 2002-107654	20021022
PRIORITY APPLN. INFO.:			JP 1999-191638	A 19990706
			WO 2000-IB868	W 20000628

OTHER SOURCE(S): MARPAT 134:100860  
 GI



AB Title compds. I ( $n = 0, 1, 2$ ;  $X = \text{halo}$ ) were prepared. Thus, 4.8 g N-chlorosuccinimide was added to a solution of 6.75 g 2-[ $(3,4,4\text{-trifluoro-}3-$

butenyl)thio]thiazole in 60 mL CCl<sub>4</sub>, and the mixture was refluxed for 18 h to give I (n = 0, X = Cl). Oxidation of this product with m-chloroperoxybenzoic acid and with 31% H<sub>2</sub>O<sub>2</sub> gave I (n = 1, X = Cl) and I (n = 2, X = Cl), resp. I (n = 0, 1, 2; X = Cl) showed 100-71% controlling effect against *Meloidogyne incognita* on tomatoes.

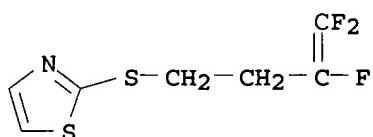
IT 109993-23-9P 318290-96-9P 318290-97-0P

318290-98-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(preparation and nematicidal activity of)

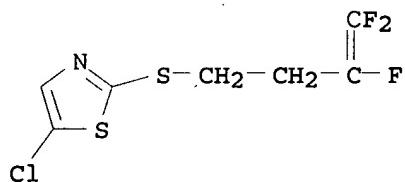
RN 109993-23-9 CAPLUS

CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



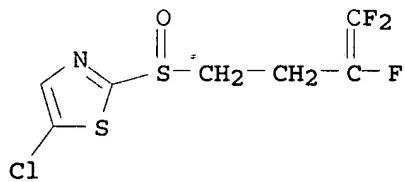
RN 318290-96-9 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



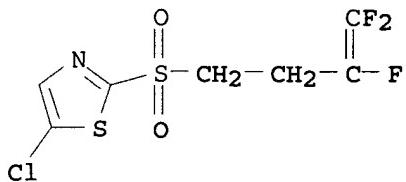
RN 318290-97-0 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 318290-98-1 CAPLUS

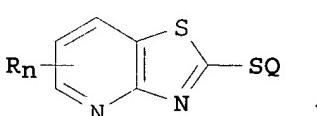
CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:335074 CAPLUS  
 DOCUMENT NUMBER: 132:334457  
 TITLE: Preparation of 2-haloalkylthiothiazolo[4,5-b]pyridines as pesticides and parasiticides.  
 INVENTOR(S): Wood, William Wakefield  
 PATENT ASSIGNEE(S): American Cyanamid Company, USA; BASF AG  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1000946	A2	20000517	EP 1999-308947	19991110
EP 1000946	A3	20010912		
EP 1000946	B1	20031015		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000143668	A2	20000526	JP 1999-316802	19991108
NZ 500926	A	20010427	NZ 1999-500926	19991109
AT 252106	E	20031115	AT 1999-308947	19991110
ES 2210990	T3	20040701	ES 1999-308947	19991110
CA 2289363	AA	20000516	CA 1999-2289363	19991112
BR 9905615	A	20001107	BR 1999-5615	19991112
ZA 9907122	A	20000519	ZA 1999-7122	19991115
KR 2000035479	A	20000626	KR 1999-50630	19991115
MX 9910487	A	20000930	MX 1999-10487	19991115
AU 9959436	A1	20000518	AU 1999-59436	19991116
TR 9902807	A2	20000621	TR 1999-2807	19991116
PRIORITY APPLN. INFO.:			US 1998-192648	A 19981116
OTHER SOURCE(S):		MARPAT 132:334457		
GI				



AB A method for control of helminth, nematode, insect, or acarid pests or parasites comprises contacting said pests or parasites with title compds. [I; R = halo, NO<sub>2</sub>, cyano, alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio,

haloalkylthio, etc.; n = 0-3; Q = alkenyl, haloalkenyl, cycloalkyl, halocycloalkyl, cycloalkenyl, halocycloalkenyl, (substituted) alkyl, haloalkyl]. Thus, thiazolo[4,5-b]pyridine-2-thiol, 1,1,2-trifluoro-4-bromobutane, and K<sub>2</sub>CO<sub>3</sub> were heated in DMF at 60° for 24 h to give 64% 2-[(4,4,4-trifluoro-3-but enyl)thio]thiazolo[4,5-b]pyridine. The latter at 10 ppm reduced root-knot galling of tomatoes by Meloidogyne incognita to 0%, vs. 70% for untreated controls.

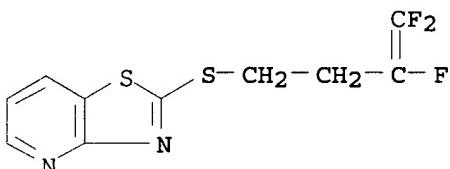
IT 267409-05-2P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 2-haloalkylthiothiazolo[4,5-b]pyridines as pesticides and parasiticides)

RN 267409-05-2 CAPLUS

CN Thiazolo[4,5-b]pyridine, 2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 15 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:709064 CAPLUS

DOCUMENT NUMBER: 129:330724

TITLE: Preparation of 5-chloro-2-(4,4-difluorobut-3-enylsulfonyl)thiazole and intermediates

INVENTOR(S): Bowden, Martin Charles; Brown, Stephen Martin

PATENT ASSIGNEE(S): Zeneca Limited, UK

SOURCE: PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847884	A1	19981029	WO 1998-GB1034	19980408
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
GB 2324526	A1	19981028	GB 1998-7610	19980408
GB 2324526	B2	20010425		
AU 9869301	A1	19981113	AU 1998-69301	19980408
EP 977744	A1	20000209	EP 1998-915010	19980408
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2001521546	T2	20011106	JP 1998-545264	19980408
ZA 9803174	A	19981024	ZA 1998-3174	19980415

TW 422843	B	20010221	TW 1998-87105774	19980416
US 6025497	A	20000215	US 1998-66099	19980423
US 6156904	A	20001205	US 1999-469822	19991222
PRIORITY APPLN. INFO.:			GB 1997-8280	A 19970424
			WO 1998-GB1034	W 19980408
			US 1998-66099	A3 19980423

OTHER SOURCE(S): MARPAT 129:330724

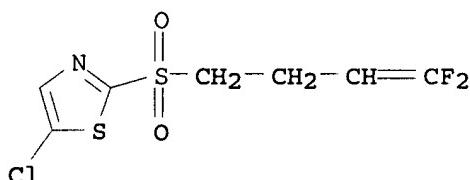
AB The title compound (I), is useful as an agricultural nematocide, was prepared from 2-mercaptopthiazole by a multistep process involving S-alkylation with F<sub>2</sub>ClCCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>X (X = leaving group), hetero ring chlorination, alkyl chain dehydrochlorination and S oxidation to the corresponding sulfone. For example, refluxing a mixture of 2-mercaptopthiazole, F<sub>2</sub>ClCCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>Cl and K<sub>2</sub>CO<sub>3</sub> in Me<sub>2</sub>CO gave 94% 2-(4-chloro-4,4-difluorobutylthio)thiazole which was chlorinated with SO<sub>2</sub>Cl<sub>2</sub> in AcNMe<sub>2</sub> to give 87% 5-chloro-2-(4-chloro-4,4-difluorobutylthio)thiazole. This was stirred with powdered K<sub>2</sub>CO<sub>3</sub> in AcNMe<sub>2</sub> and the product (86%) treated with H<sub>2</sub>O<sub>2</sub> in AcOH to give 82% I.

IT 172933-33-4P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of nematocidal 5-chloro-2-(4,4-difluorobut-3-enylsulfonyl)thiazole and intermediates)

RN 172933-33-4 CAPLUS

CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1998:621188 CAPLUS  
 DOCUMENT NUMBER: 129:244865  
 TITLE: Derivatives of 4,4-difluorobut-3-enylsulfinic acid and their use as pesticides  
 INVENTOR(S): Salmon, Roger  
 PATENT ASSIGNEE(S): Zeneca Ltd., UK  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9840352	A1	19980917	WO 1998-GB692	19980304
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,				

UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,  
 FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,  
 GA, GN, ML, MR, NE, SN, TD, TG  
 AU 9865076 A1 19980929 AU 1998-65076 19980304  
 EP 984927 A1 20000315 EP 1998-910847 19980304  
 EP 984927 B1 20030326  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI  
 JP 2001514649 T2 20010911 JP 1998-539343 19980304  
 AT 235464 E 20030415 AT 1998-910847 19980304  
 PT 984927 T 20030630 PT 1998-910847 19980304  
 DE 29824975 U1 20031127 DE 1998-29824975 19980304  
 ES 2195326 T3 20031201 ES 1998-910847 19980304  
 ZA 9802017 A 19980914 ZA 1998-2017 19980310  
 US 6274632 B1 20010814 US 1999-380912 19990910  
 PRIORITY APPLN. INFO.: GB 1997-5120 A 19970312  
 EP 1998-910847 A 19980304  
 WO 1998-GB692 W 19980304

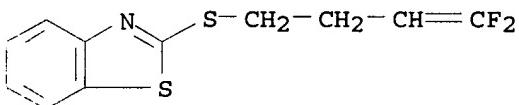
OTHER SOURCE(S): CASREACT 129:244865; MARPAT 129:244865

AB The title compds. CF<sub>2</sub>:CXCH<sub>2</sub>CH<sub>2</sub>S(O)R (I; X represents hydrogen, halo or lower alkyl, and R represents a group OR<sub>1</sub> or NR<sub>2</sub>R<sub>3</sub> wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are halo, cyano, nitro, OH, etc.) are prepared. I are useful for controlling insect and like pests of agriculture. Thus, bis(4,4-difluorobut-3-enyl)disulfide (preparation given) was reacted with n-hexanol in the presence of K<sub>2</sub>CO<sub>3</sub> and treated with N-bromosuccinimide to give n-hexyl 4,4-difluorobut-3-enylsulfinate. I were tested and showed good activity against spider mites.

IT 160136-15-2, 2-(4,4-Difluorobut-3-enylthio)benzothiazole  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of 4,4-difluorobut-3-enylsulfinic acid derivs. as pesticides)

RN 160136-15-2 CAPLUS

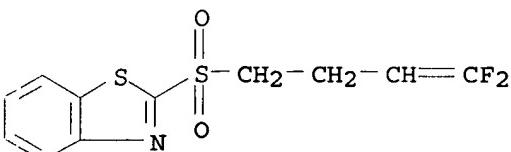
CN Benzothiazole, 2-[(4,4-difluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



IT 213197-17-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of 4,4-difluorobut-3-enylsulfinic acid derivs. as pesticides)

RN 213197-17-2 CAPLUS

CN Benzothiazole, 2-[(4,4-difluoro-3-but enyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1995:994834 CAPLUS  
 DOCUMENT NUMBER: 124:117350  
 TITLE: Preparation of (4,4-difluorobut-3-enylthio)-  
 substituted heterocyclic or carbocyclic ring compounds  
 having pesticidal activity  
 INVENTOR(S): Turnbull, Michael Drysdale; Bansal, Harjinder Singh;  
 Smith, Alison Mary; Salmon, Roger; Fitzjohn, Steven;  
 Godfrey, Christopher Richard Ayles; Hotson, Matthew  
 Brian; Sillars, Nan Catherine; Dowling, Alan John  
 PATENT ASSIGNEE(S): Zeneca Ltd., UK  
 SOURCE: PCT Int. Appl., 194 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9524403	A1	19950914	WO 1995-GB400	19950227
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2182520	AA	19950914	CA 1995-2182520	19950227
AU 9518164	A1	19950925	AU 1995-18164	19950227
AU 685242	B2	19980115		
EP 749433	A1	19961227	EP 1995-909854	19950227
EP 749433	B1	20030507		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1143958	A	19970226	CN 1995-192029	19950227
HU 74902	A2	19970228	HU 1996-2417	19950227
HU 215211	B	19981028		
BR 9507042	A	19970909	BR 1995-7042	19950227
JP 09510197	T2	19971014	JP 1995-523286	19950227
CZ 285605	B6	19990915	CZ 1996-2632	19950227
RU 2151147	C1	20000620	RU 1996-120148	19950227
RO 116399	B1	20010130	RO 1996-1788	19950227
SK 281491	B6	20010409	SK 1996-1148	19950227
AT 239714	E	20030515	AT 1995-909854	19950227
PT 749433	T	20030829	PT 1995-909854	19950227
ES 2199240	T3	20040216	ES 1995-909854	19950227
US 5705516	A	19980106	US 1995-400912	19950308
US 5912243	A	19990615	US 1996-702623	19960828
FI 9603539	A	19960909	FI 1996-3539	19960909
NO 9603776	A	19961107	NO 1996-3776	19960909
LV 11686	B	19970620	LV 1996-363	19960910
US 5952359	A	19990914	US 1997-887858	19970703
PRIORITY APPLN. INFO.:				
		GB 1994-4716	A	19940310
		GB 1994-4717	A	19940310
		GB 1994-4718	A	19940310
		GB 1994-4719	A	19940310
		GB 1994-4720	A	19940310
		GB 1994-4721	A	19940310
		GB 1995-521	A	19950111
		WO 1995-GB400	W	19950227
		US 1995-400912	A3	19950308

OTHER SOURCE(S) :  
GI

MARPAT 124:117350

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title compds. represented by the general formula RS(O)nCH<sub>2</sub>CH<sub>2</sub>CH:CF<sub>2</sub> [n = 0,1,2; R is a group of formulas Q - Q13 (X = O, S), etc., wherein the S(O)mCH<sub>2</sub>CH<sub>2</sub>CH:CF<sub>2</sub> group is at least one of R1 (when attached to a carbon atom), R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> or R<sub>6</sub>; e.g. when R<sub>1</sub> is attached to a carbon atom, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> are each independently H, optionally substituted alkyl, optionally substituted alkenyl, alkynyl, cycloalkyl, alkylcycloalkyl, alkoxy, alkenyloxy, alkynyoxy, hydroxyalkyl, alkoxyalkyl, optionally substituted aryl, optionally substituted arylalkyl, optionally substituted heteroaryl, optionally substituted heteroarylalkyl, optionally substituted aryloxy, optionally substituted arylalkoxy, optionally substituted aryloxyalkyl, optionally substituted heteroaryloxy, optionally substituted heteroarylalkoxy, optionally substituted heteroaryloxyalkyl, haloalkyl, haloalkenyl, haloalkynyl, haloalkoxy, haloalkenyloxy, haloalkynyoxy, halo, HO, cyano, NO<sub>2</sub>, NR<sub>7</sub>R<sub>8</sub>, NR<sub>7</sub>COR<sub>8</sub>, NR<sub>7</sub>CSR<sub>8</sub>, NR<sub>7</sub>SO<sub>2</sub>R<sub>8</sub>, N(SO<sub>2</sub>R<sub>7</sub>)(SO<sub>2</sub>R<sub>8</sub>), COR<sub>7</sub>, CONR<sub>7</sub>R<sub>8</sub>, alkyl-CNR<sub>7</sub>R<sub>8</sub>, CR<sub>7</sub>NR<sub>8</sub>, CO<sub>2</sub>R<sub>7</sub>, O<sub>2</sub>CR<sub>7</sub>, SR<sub>7</sub>, SOR<sub>7</sub>, SO<sub>2</sub>R<sub>7</sub>, alkyl-SR<sub>7</sub>, alkyl-SOR<sub>7</sub>, alkyl-SO<sub>2</sub>R<sub>7</sub>, OSO<sub>2</sub>R<sub>7</sub>, SO<sub>2</sub>NR<sub>7</sub>R<sub>8</sub>, CSNR<sub>7</sub>R<sub>9</sub>, SiR<sub>7</sub>R<sub>8</sub>R<sub>9</sub>, OCH<sub>2</sub>CO<sub>2</sub>R<sub>7</sub>, OCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>R<sub>7</sub>, CONR<sub>7</sub>SO<sub>2</sub>R<sub>8</sub>, alkyl-CNR<sub>7</sub>SO<sub>2</sub>R<sub>8</sub>, NHCONR<sub>7</sub>R<sub>8</sub>, NHCSNR<sub>7</sub>R<sub>8</sub>, or an adjacent pair of R<sub>1</sub> - R<sub>6</sub> when taken together form a fused 5- or 6-membered carbocyclic or heterocyclic ring] are prepared. Thus, a solution of 4,4-difluorobut-3-enyl thioacetate in 50% aqueous NaOH was stirred vigorously for 30 min, followed by successively adding Et 5-chloro-4-methylisoxazole in CH<sub>2</sub>Cl<sub>2</sub> and Bu<sub>4</sub>NBr, and the reaction mixture was stirred at the ambient temperature for 3 h to give Et

5-(4,4-difluorobut-3-enylthio)-3-methylisoxazole-4-carboxylate. The latter compound was saponified with a mixture of 2 M NaOH and isopropanol and acidified with 2 M HCl to give the acid 5-(4,4-difluorobut-3-enylthio)-3-methylisoxazole-4-carboxylic acid, which was treated with Et chloroformate and Et<sub>3</sub>N in CH<sub>2</sub>Cl<sub>2</sub> at 0° and then with NH<sub>3</sub>(g) to give the amide 5-(4,4-difluorobut-3-enylthio)-3-methylisoxazole-4-carboxamide (I). I controlled 100% Tetranychus urticae (spider mite) and Myzus persicae (green peach aphid) upon contract at 100 ppm and 100% Meloidogyne incognita (root knot nematode) at 2 ppm as a drench solution to 2 wk old cucumber plants.

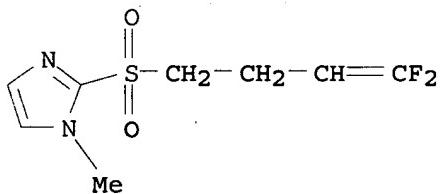
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	172932-88-6P	172932-89-7P	172932-90-0P
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	172932-94-4P	172932-95-5P	172932-96-6P
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	172933-03-8P	172933-04-9P	172933-05-0P
	172933-08-3P	172933-09-4P	172933-10-7P
	172933-11-8P	172933-12-9P	172933-13-0P
	172933-14-1P	172933-15-2P	172933-16-3P
	172933-17-4P	172933-24-3P	172933-25-4P
	172933-27-6P	172933-28-7P	172933-29-8P
	172933-30-1P	172933-31-2P	172933-33-4P
	172933-34-5P	172933-35-6P	172933-36-7P
	172933-37-8P	172933-38-9P	172933-39-0P
	172933-40-3P	172933-45-8P	172933-46-9P
	172933-47-0P	172933-48-1P	172933-49-2P
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 172933-83-4P 172933-84-5P 172933-85-6P  
 172933-86-7P 172933-87-8P 172933-88-9P  
 172933-89-0P 172933-90-3P 172933-91-4P  
 172933-92-5P 172933-93-6P 172933-94-7P  
 172933-95-8P 172933-96-9P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of (difluorobutenylthio)-substituted heterocyclic or carbocyclic ring compds. as pesticides)

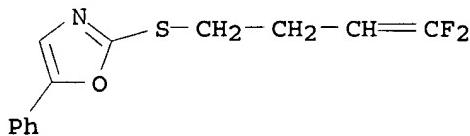
RN 172932-48-8 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1-methyl- (9CI) (CA INDEX NAME)



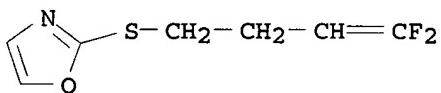
RN 172932-86-4 CAPLUS

CN Oxazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-phenyl- (9CI) (CA INDEX NAME)



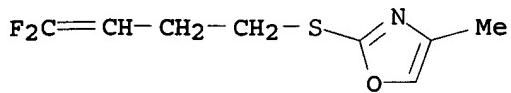
RN 172932-87-5 CAPLUS

CN Oxazole, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

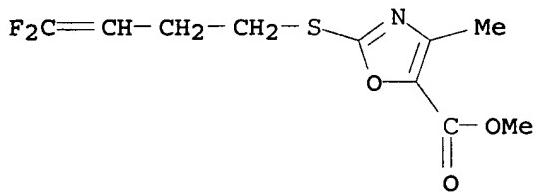


RN 172932-88-6 CAPLUS

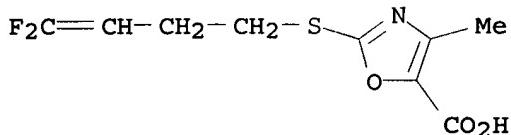
CN Oxazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)



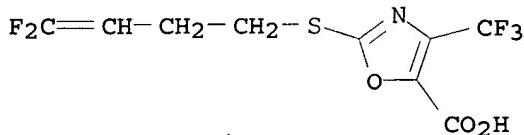
RN 172932-89-7 CAPLUS  
CN 5-Oxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl-, methyl ester (9CI) (CA INDEX NAME)



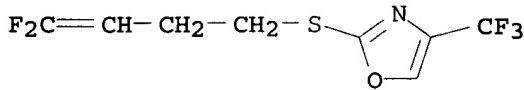
RN 172932-90-0 CAPLUS  
CN 5-Oxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI)  
(CA INDEX NAME)



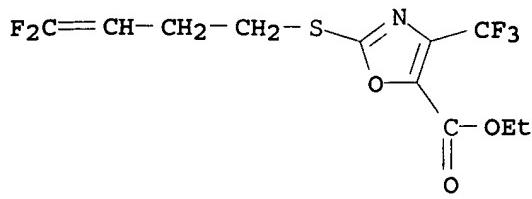
RN 172932-91-1 CAPLUS  
CN 5-Oxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4- (trifluoromethyl)- (9CI) (CA INDEX NAME)



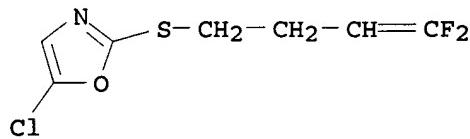
RN 172932-92-2 CAPLUS  
CN Oxazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-(trifluoromethyl)- (9CI) (CA INDEX NAME)



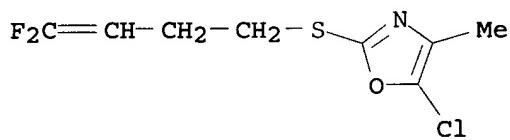
RN 172932-93-3 CAPLUS  
CN 5-Oxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4- (trifluoromethyl)-, ethyl ester (9CI) (CA INDEX NAME)



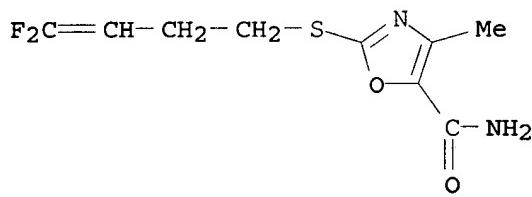
RN 172932-94-4 CAPLUS  
CN Oxazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



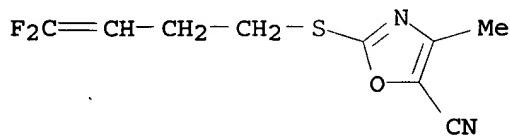
RN 172932-95-5 CAPLUS  
CN Oxazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)



RN 172932-96-6 CAPLUS  
CN 5-Oxazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI)  
(CA INDEX NAME)



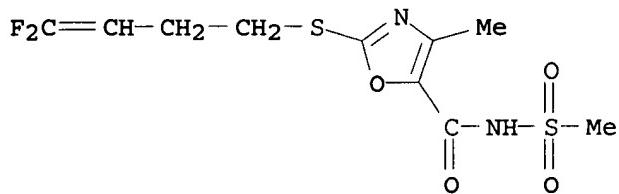
RN 172932-97-7 CAPLUS  
CN 5-Oxazolecarbonitrile, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI)  
(CA INDEX NAME)



RN 172932-98-8 CAPLUS

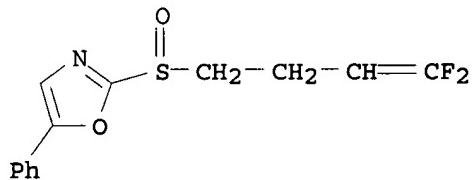
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CN 5-Oxazolecarboxamide, 2-[(4,4-difluoro-3-but enyl)thio]-4-methyl-N-(methylsulfonyl)- (9CI) (CA INDEX NAME)



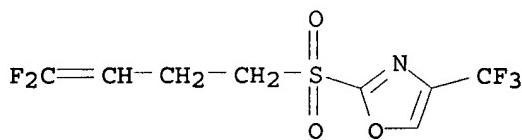
RN 172932-99-9 CAPLUS

CN Oxazole, 2-[(4,4-difluoro-3-but enyl)sulfinyl]-5-phenyl- (9CI) (CA INDEX NAME)



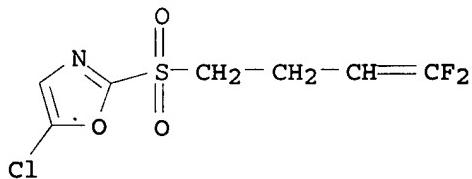
RN 172933-00-5 CAPLUS

CN Oxazole, 2-[(4,4-difluoro-3-but enyl)sulfonyl]-4-(trifluoromethyl)- (9CI) (CA INDEX NAME)



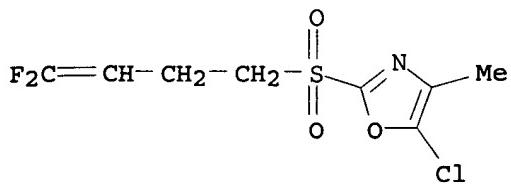
RN 172933-01-6 CAPLUS

CN Oxazole, 5-chloro-2-[(4,4-difluoro-3-but enyl)sulfonyl]- (9CI) (CA INDEX NAME)

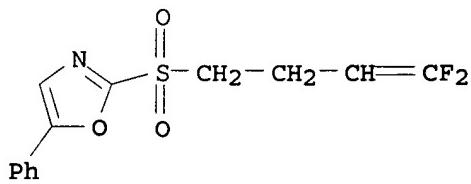


RN 172933-02-7 CAPLUS

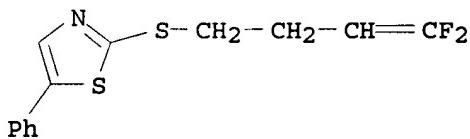
CN Oxazole, 5-chloro-2-[(4,4-difluoro-3-but enyl)sulfonyl]-4-methyl- (9CI) (CA INDEX NAME)



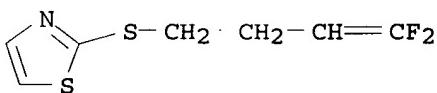
RN 172933-03-8 CAPLUS  
CN Oxazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-5-phenyl- (9CI) (CA INDEX NAME)



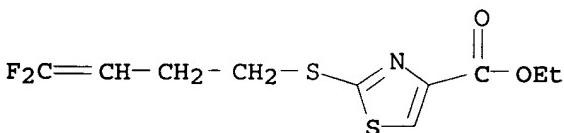
RN 172933-04-9 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-phenyl- (9CI) (CA INDEX NAME)



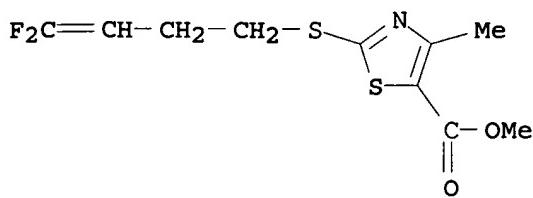
RN 172933-05-0 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



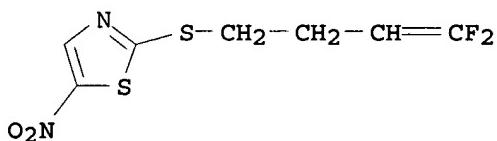
RN 172933-08-3 CAPLUS  
CN 4-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, ethyl ester (9CI) (CA INDEX NAME)



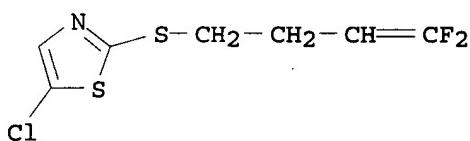
RN 172933-09-4 CAPLUS  
CN 5-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl-, methyl ester (9CI) (CA INDEX NAME)



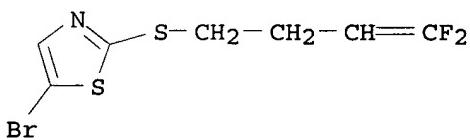
RN 172933-10-7 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-nitro- (9CI) (CA INDEX NAME)



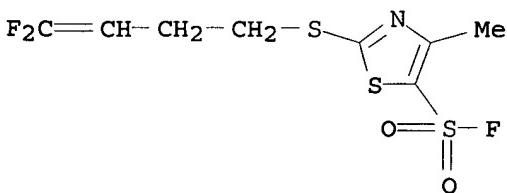
RN 172933-11-8 CAPLUS  
CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 172933-12-9 CAPLUS  
CN Thiazole, 5-bromo-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



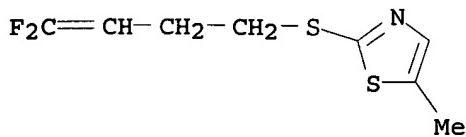
RN 172933-13-0 CAPLUS  
CN 5-Thiazolesulfonyl fluoride, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)



RN 172933-14-1 CAPLUS

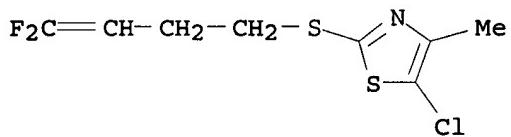
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CN Thiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-methyl- (9CI) (CA INDEX NAME)



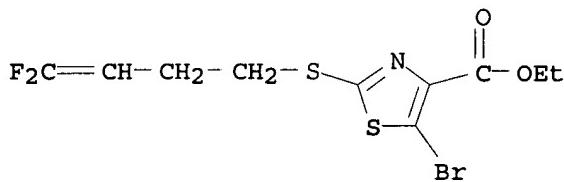
RN 172933-15-2 CAPLUS

CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)



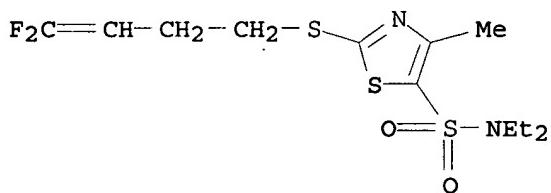
RN 172933-16-3 CAPLUS

CN 4-Thiazolecarboxylic acid, 5-bromo-2-[(4,4-difluoro-3-butenyl)thio]-, ethyl ester (9CI) (CA INDEX NAME)



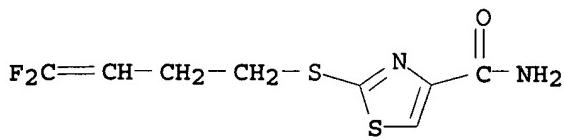
RN 172933-17-4 CAPLUS

CN 5-Thiazolesulfonamide, 2-[(4,4-difluoro-3-butenyl)thio]-N,N-diethyl-4-methyl- (9CI) (CA INDEX NAME)



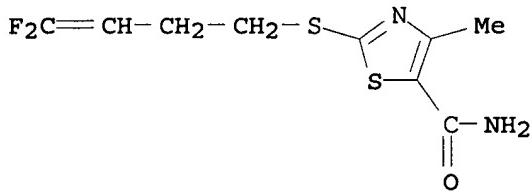
RN 172933-24-3 CAPLUS

CN 4-Thiazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



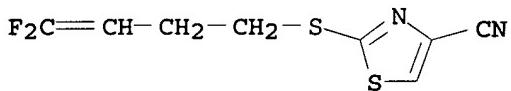
RN 172933-25-4 CAPLUS

CN 5-Thiazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI)  
(CA INDEX NAME)



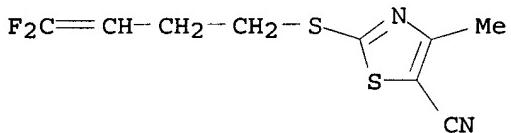
RN 172933-27-6 CAPLUS

CN 4-Thiazolecarbonitrile, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



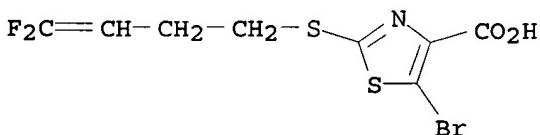
RN 172933-28-7 CAPLUS

CN 5-Thiazolecarbonitrile, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI)  
(CA INDEX NAME)



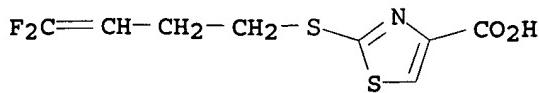
RN 172933-29-8 CAPLUS

CN 4-Thiazolecarboxylic acid, 5-bromo-2-[(4,4-difluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)

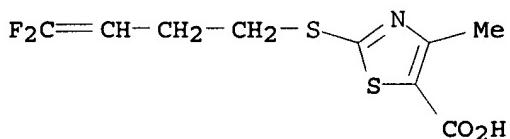


RN 172933-30-1 CAPLUS

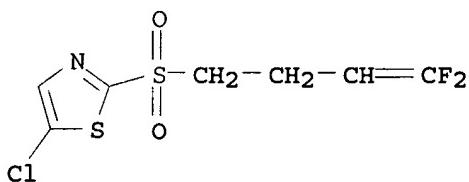
CN 4-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



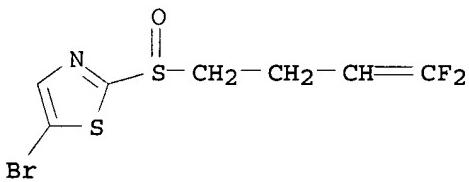
RN 172933-31-2 CAPLUS  
CN 5-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl-  
(9CI) (CA INDEX NAME)



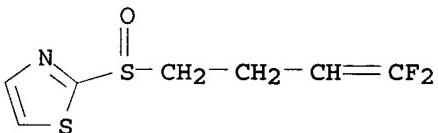
RN 172933-33-4 CAPLUS  
CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



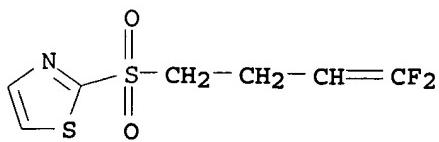
RN 172933-34-5 CAPLUS  
CN Thiazole, 5-bromo-2-[(4,4-difluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



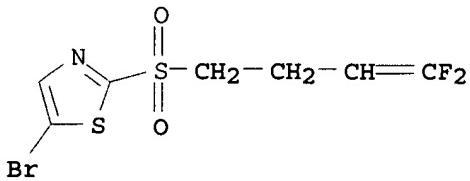
RN 172933-35-6 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



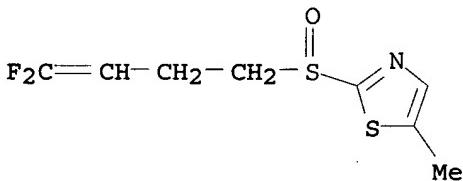
RN 172933-36-7 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



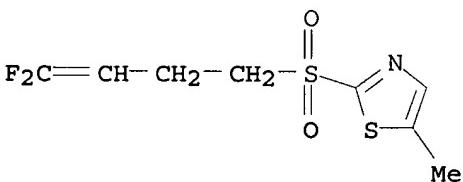
RN 172933-37-8 CAPLUS  
CN Thiazole, 5-bromo-2-[(4,4-difluoro-3-but enyl)sulfonyl]- (9CI) (CA INDEX NAME)



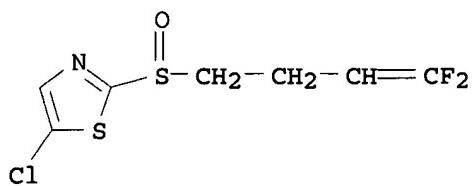
RN 172933-38-9 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-but enyl)sulfinyl]-5-methyl- (9CI) (CA INDEX NAME)



RN 172933-39-0 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-but enyl)sulfonyl]-5-methyl- (9CI) (CA INDEX NAME)

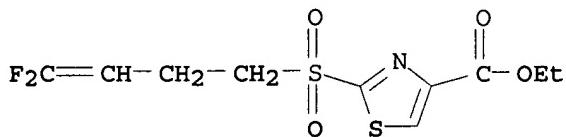


RN 172933-40-3 CAPLUS  
CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-but enyl)sulfinyl]- (9CI) (CA INDEX NAME)



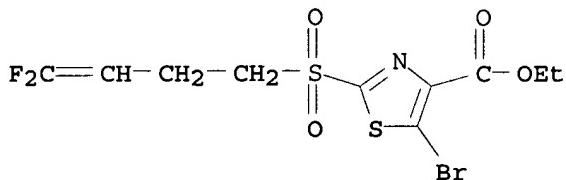
RN 172933-45-8 CAPLUS

CN 4-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



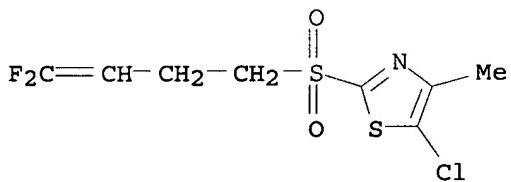
RN 172933-46-9 CAPLUS

CN 4-Thiazolecarboxylic acid, 5-bromo-2-[(4,4-difluoro-3-butenyl)sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



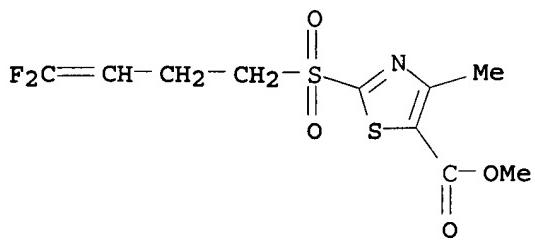
RN 172933-47-0 CAPLUS

CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-methyl- (9CI)  
(CA INDEX NAME)



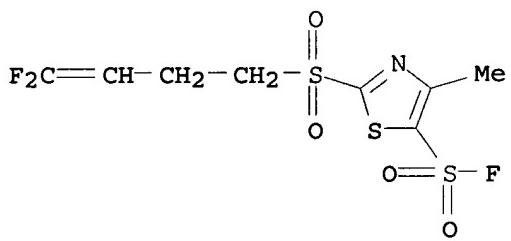
RN 172933-48-1 CAPLUS

CN 5-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-methyl-, methyl ester (9CI) (CA INDEX NAME)



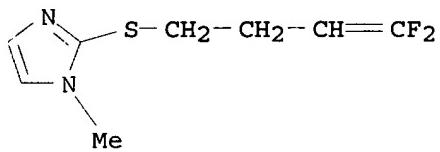
RN 172933-49-2 CAPLUS

CN 5-Thiazolesulfonyl fluoride, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-methyl- (9CI) (CA INDEX NAME)



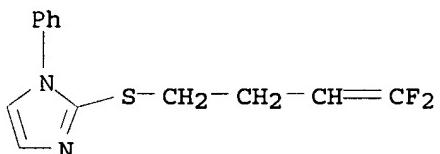
RN 172933-50-5 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-methyl- (9CI) (CA INDEX NAME)



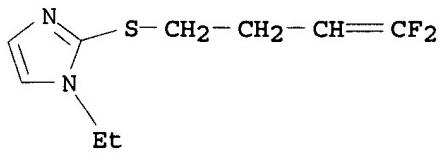
RN 172933-51-6 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-phenyl- (9CI) (CA INDEX NAME)

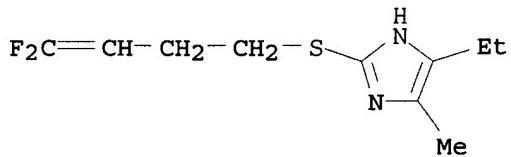


RN 172933-52-7 CAPLUS

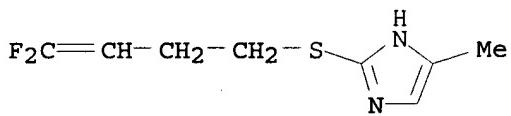
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-ethyl- (9CI) (CA INDEX NAME)



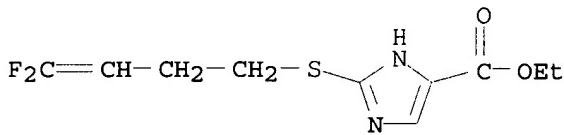
RN 172933-53-8 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-ethyl-5-methyl- (9CI)  
(CA INDEX NAME)



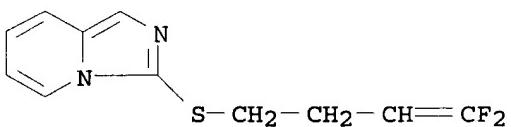
RN 172933-54-9 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)



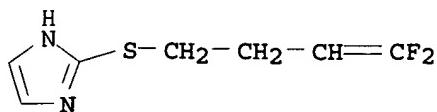
RN 172933-55-0 CAPLUS  
CN 1H-Imidazole-4-carboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, ethyl ester (9CI) (CA INDEX NAME)



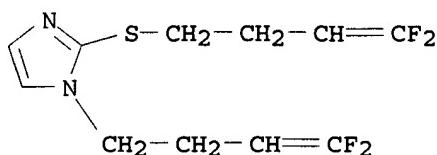
RN 172933-56-1 CAPLUS  
CN Imidazo[1,5-a]pyridine, 3-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



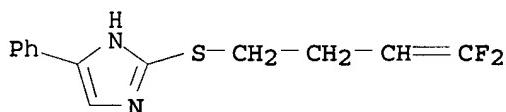
RN 172933-57-2 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



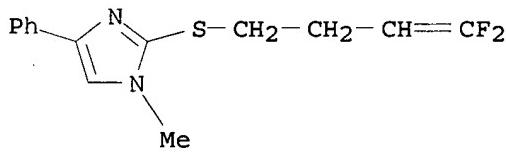
RN 172933-58-3 CAPLUS  
CN 1H-Imidazole, 1-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



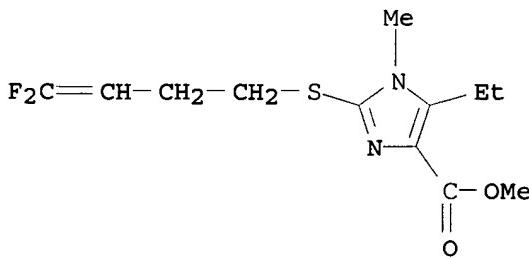
RN 172933-59-4 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-phenyl- (9CI) (CA INDEX NAME)



RN 172933-60-7 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-methyl-4-phenyl- (9CI) (CA INDEX NAME)

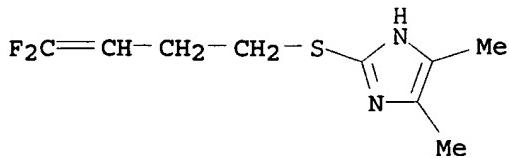


RN 172933-61-8 CAPLUS  
CN 1H-Imidazole-4-carboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-5-ethyl-1-methyl-, methyl ester (9CI) (CA INDEX NAME)

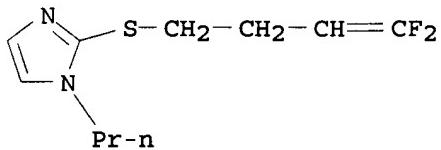


RN 172933-62-9 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-4,5-dimethyl- (9CI) (CA

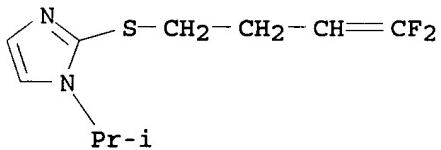
INDEX NAME)



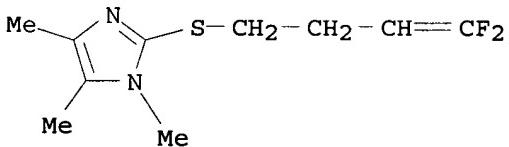
RN 172933-63-0 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-propyl- (9CI) (CA INDEX NAME)



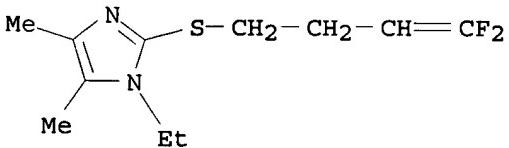
RN 172933-64-1 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 172933-65-2 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1,4,5-trimethyl- (9CI) (CA INDEX NAME)



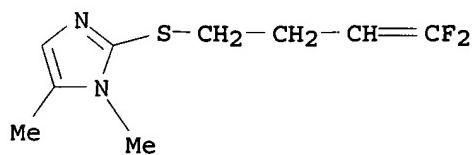
RN 172933-66-3 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-ethyl-4,5-dimethyl- (9CI) (CA INDEX NAME)



RN 172933-67-4 CAPLUS

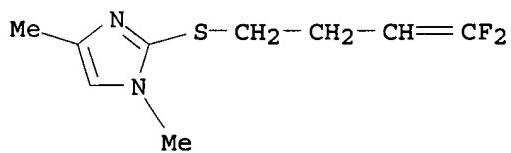
10518454.trn

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1,5-dimethyl- (9CI) (CA INDEX NAME)



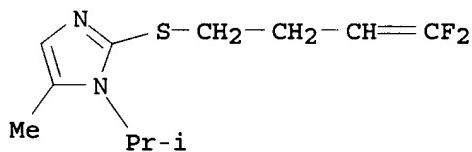
RN 172933-68-5 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1,4-dimethyl- (9CI) (CA INDEX NAME)



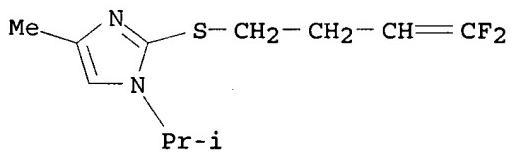
RN 172933-69-6 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-methyl-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



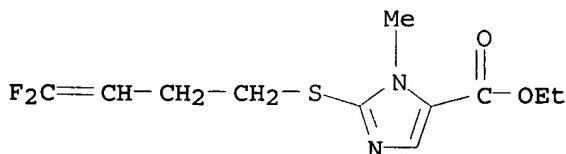
RN 172933-70-9 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



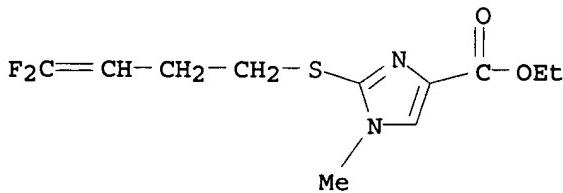
RN 172933-71-0 CAPLUS

CN 1H-Imidazole-5-carboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-1-methyl-, ethyl ester (9CI) (CA INDEX NAME)



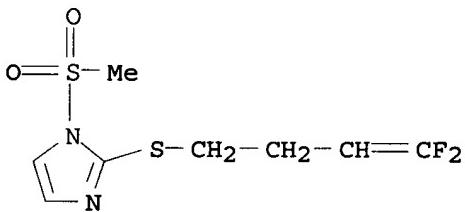
RN 172933-72-1 CAPLUS

CN 1H-Imidazole-4-carboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-1-methyl-  
, ethyl ester (9CI) (CA INDEX NAME)



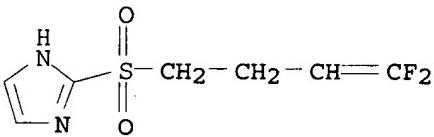
RN 172933-73-2 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-(methylsulfonyl)- (9CI)  
(CA INDEX NAME)



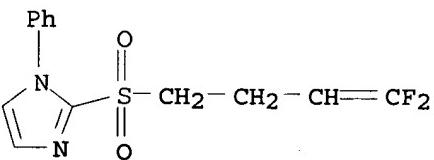
RN 172933-74-3 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



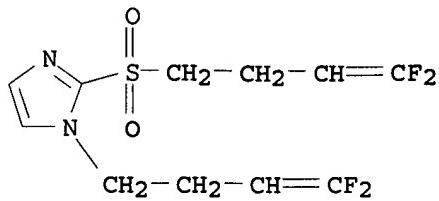
RN 172933-75-4 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1-phenyl- (9CI) (CA  
INDEX NAME)

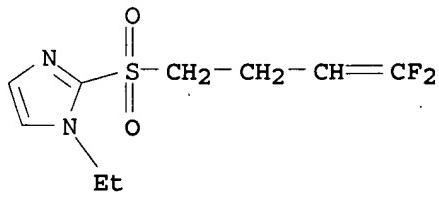


RN 172933-76-5 CAPLUS

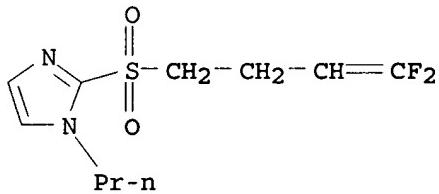
CN 1H-Imidazole, 1-(4,4-difluoro-3-butenyl)-2-[(4,4-difluoro-3-  
butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



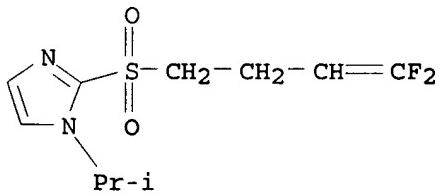
RN 172933-77-6 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1-ethyl- (9CI) (CA INDEX NAME)



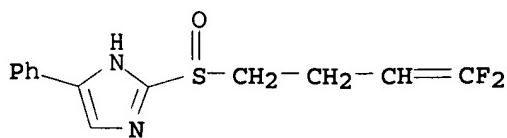
RN 172933-78-7 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1-propyl- (9CI) (CA INDEX NAME)



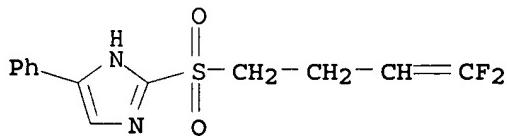
RN 172933-79-8 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



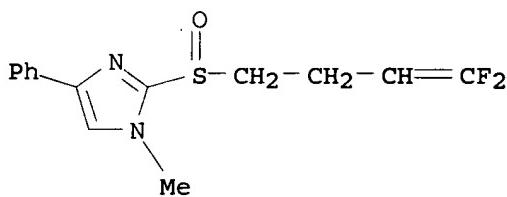
RN 172933-80-1 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-4-phenyl- (9CI) (CA INDEX NAME)



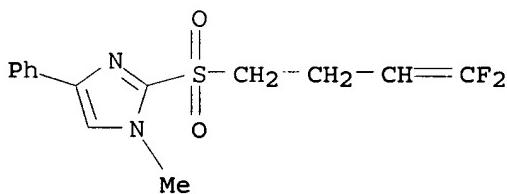
RN 172933-81-2 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-phenyl- (9CI) (CA INDEX NAME)



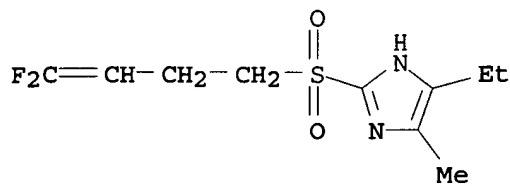
RN 172933-82-3 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-1-methyl-4-phenyl- (9CI) (CA INDEX NAME)



RN 172933-83-4 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1-methyl-4-phenyl- (9CI) (CA INDEX NAME)

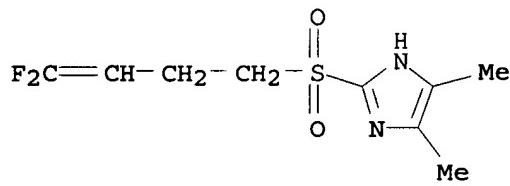


RN 172933-84-5 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-ethyl-5-methyl- (9CI) (CA INDEX NAME)



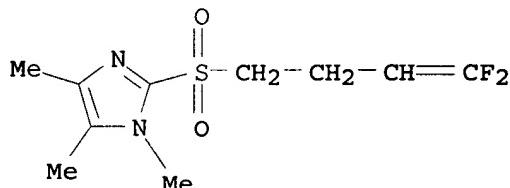
RN 172933-85-6 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4,5-dimethyl- (9CI)  
(CA INDEX NAME)



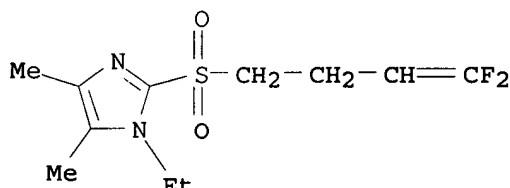
RN 172933-86-7 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1,4,5-trimethyl- (9CI)  
(CA INDEX NAME)



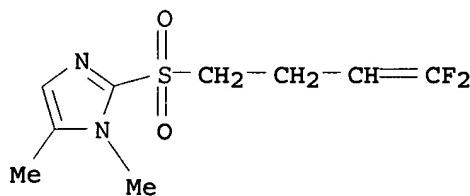
RN 172933-87-8 CAPLUS

CN 1H-Imidazole, 2-[(4,4-difluoro-3-butyl)sulfonyl]-1-ethyl-4,5-dimethyl-  
(9CI) (CA INDEX NAME)

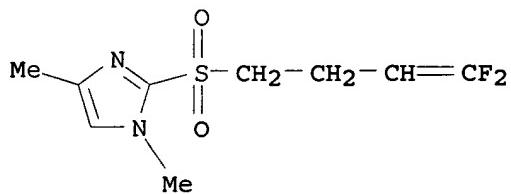


RN 172933-88-9 CAPLUS

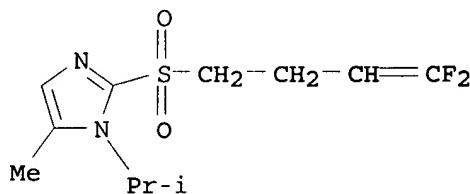
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butyl)sulfonyl]-1,5-dimethyl- (9CI)  
(CA INDEX NAME)



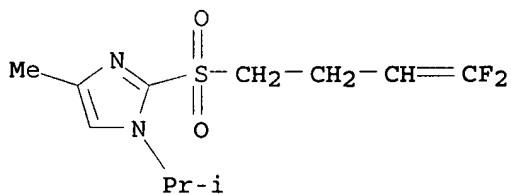
RN 172933-89-0 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1,4-dimethyl- (9CI)  
(CA INDEX NAME)



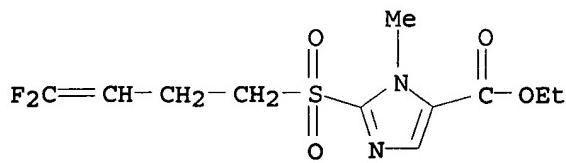
RN 172933-90-3 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-5-methyl-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



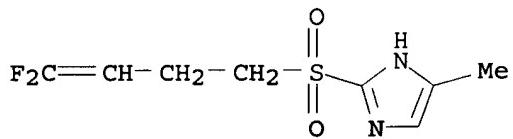
RN 172933-91-4 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-methyl-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



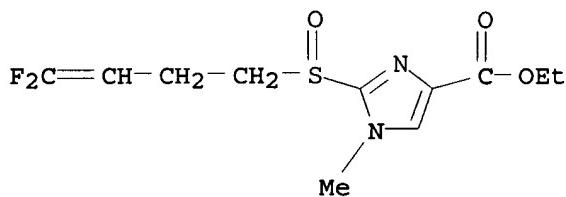
RN 172933-92-5 CAPLUS  
CN 1H-Imidazole-5-carboxylic acid, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1-methyl-, ethyl ester (9CI) (CA INDEX NAME)



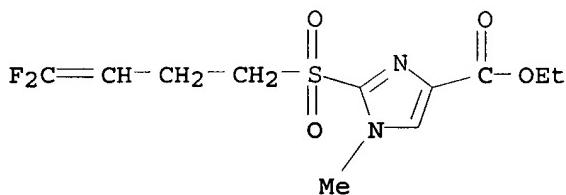
RN 172933-93-6 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-methyl- (9CI) (CA INDEX NAME)



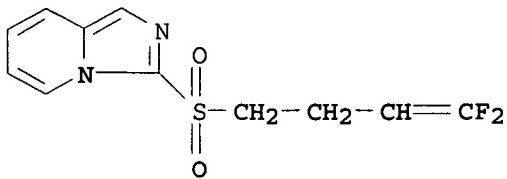
RN 172933-94-7 CAPLUS  
CN 1H-Imidazole-4-carboxylic acid, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-1-methyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 172933-95-8 CAPLUS  
CN 1H-Imidazole-4-carboxylic acid, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-1-methyl-, ethyl ester (9CI) (CA INDEX NAME)



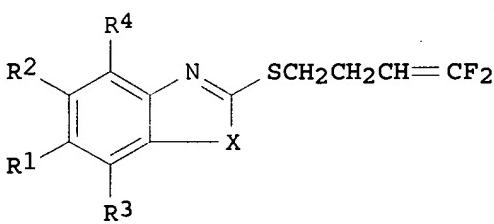
RN 172933-96-9 CAPLUS  
CN Imidazo[1,5-a]pyridine, 3-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 18 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1995:934009 CAPLUS  
 DOCUMENT NUMBER: 123:340102  
 TITLE: Process for the preparation of 2-(4,4-difluorobut-3-enylthio)benzthiazoles and -benzoxazoles  
 INVENTOR(S): Bansal, Harjinder Singh; Cleare, Peter John Vernon  
 PATENT ASSIGNEE(S): Zeneca Ltd., UK  
 SOURCE: PCT Int. Appl., 32 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9519352	A2	19950720	WO 1995-GB3	19950104
WO 9519352	A3	19960118		
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5451681	A	19950919	US 1994-366068	19941229
ZA 9410404	A	19951010	ZA 1994-10404	19941229
AU 9513234	A1	19950801	AU 1995-13234	19950104
PRIORITY APPLN. INFO.:			GB 1994-523	A 19940113
			WO 1995-GB3	W 19950104

OTHER SOURCE(S): CASREACT 123:340102; MARPAT 123:340102  
 GI



AB The title compds. [I; R1-R4 = H, (un)substituted alkyl, (un)substituted alkenyl, alkynyl, cycloalkyl, alkylcycloalkyl, (un)substituted aryl, etc.; X = O, S], useful as agrochem. nematicides (no data), are prepared by reacting ortho-nitro- or -nitrosophenols or substituted ortho-nitro- or -nitrosothiophenols with a reducing agent comprising an alkali metal dithionite in an alkaline reaction medium in the presence of CS2, and

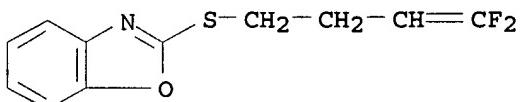
acidifying the reaction mixture. Thus, CS<sub>2</sub> was reacted with 2-nitro-5-methoxyphenol in aqueous MeOH KOH solution, and the mixture reacted with a solution of Na dithionite and KOH, producing 6-methoxy-2-mercaptopbenzoxazole in 89% yield.

IT 160136-16-3P 160136-63-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(process for the preparation of 2-(4,4-difluorobut-3-enylthio)benzthiazoles and -benzoxazoles)

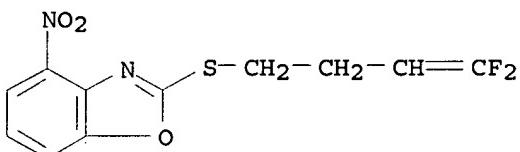
RN 160136-16-3 CAPLUS

CN Benzoxazole, 2-[(4,4-difluoro-3-butene)thio]- (9CI) (CA INDEX NAME)



RN 160136-63-0 CAPLUS

CN Benzoxazole, 2-[(4,4-difluoro-3-butene)thio]-4-nitro- (9CI) (CA INDEX NAME)



L4 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:652321 CAPLUS

DOCUMENT NUMBER: 123:55860

TITLE: Process for the preparation of 1-(heterocyclylthio)-4,4-difluoro-3-butene-derivative nematicides

INVENTOR(S): Turnbull, Michael Drysdale; Willetts, Nigel James; Fitzjohn, Steven; Kholia, Prafulla Govind; Smith, Alison Mary; Salmon, Roger; Bansal, Harjinder Singh; Williams, Alfred Glyn

PATENT ASSIGNEE(S): Zeneca Ltd., UK

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9504727	A1	19950216	WO 1994-GB1570	19940720
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9471930	A1	19950228	AU 1994-71930	19940720
EP 712395	A1	19960522	EP 1994-921059	19940720

EP 712395	B1	20020522		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
HU 73351	A2	19960729	HU 1995-3825	19940720
HU 218575	B	20001028		
CN 1128535	A	19960807	CN 1994-192999	19940720
BR 9407164	A	19960917	BR 1994-7164	19940720
JP 09501175	T2	19970204	JP 1995-506270	19940720
JP 3472304	B2	20031202		
AT 217869	E	20020615	AT 1994-921059	19940720
ES 2177580	T3	20021216	ES 1994-921059	19940720
IL 110432	A1	20000716	IL 1994-110432	19940725
ZA 9405561	A	19950328	ZA 1994-5561	19940727
US 5728833	A	19980317	US 1994-286142	19940804
US 5914423	A	19990622	US 1997-976559	19971124
PRIORITY APPLN. INFO.:			GB 1993-16219	A 19930805
			GB 1993-16220	A 19930805
			GB 1993-25453	A 19931213
			GB 1993-25455	A 19931213
			WO 1994-GB1570	W 19940720
			US 1994-286142	A3 19940804

OTHER SOURCE(S): CASREACT 123:55860; MARPAT 123:55860

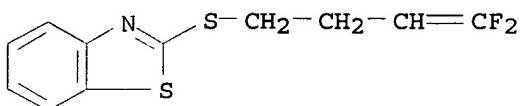
AB The title compds. XSCH<sub>2</sub>CH<sub>2</sub>CH:CF<sub>2</sub> [X = (un)substituted 5- or 6-membered heterocyclyl] [e.g., 2-(4,4-difluorobut-3-enylthio)-5-methylbenzoxazole; oil], useful as nematicides (no data), are prepared in high yield by the condensation of XSH with CF<sub>2</sub>:CHCH<sub>2</sub>CH<sub>2</sub>L [L = Cl, Br, OSO<sub>2</sub>Ra; Ra = is 4-chloroalkyl, Ph (un)substituted by 4-chloroalkyl].

IT 160136-15-2P 160136-16-3P 160136-17-4P  
 160136-19-6P 160136-21-0P 160136-24-3P  
 160136-25-4P 160136-27-6P 160136-28-7P  
 160136-29-8P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (process for the preparation of 1-(heterocyclylthio)-4,4-difluoro-3-butene-derivative nematicides)

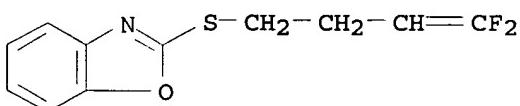
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



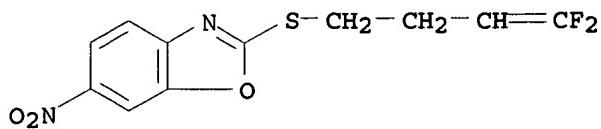
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

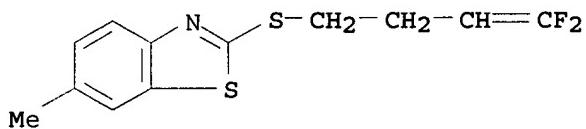


RN 160136-17-4 CAPLUS

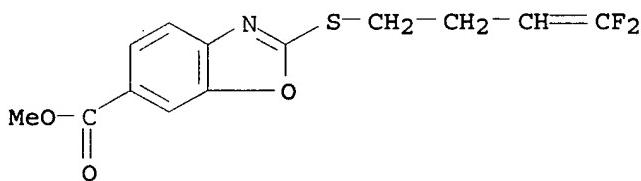
CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-nitro- (9CI) (CA INDEX NAME)



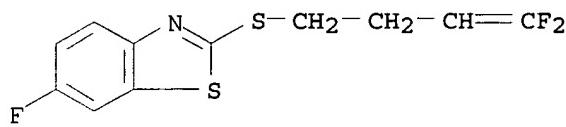
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-methyl- (9CI) (CA INDEX NAME)



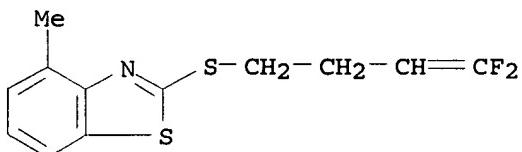
RN 160136-21-0 CAPLUS  
CN 6-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, methyl ester (9CI) (CA INDEX NAME)



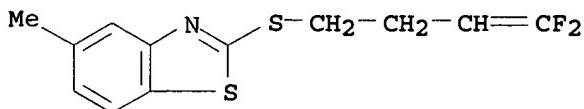
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-fluoro- (9CI) (CA INDEX NAME)



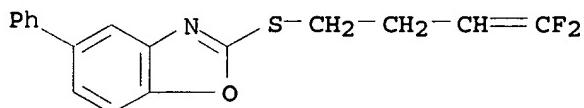
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)



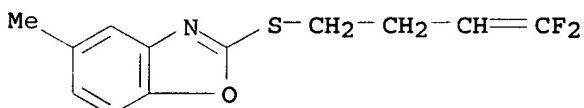
RN 160136-27-6 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-methyl- (9CI) (CA INDEX NAME)



RN 160136-28-7 CAPLUS  
 CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-phenyl- (9CI) (CA INDEX NAME)



RN 160136-29-8 CAPLUS  
 CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-methyl- (9CI) (CA INDEX NAME)



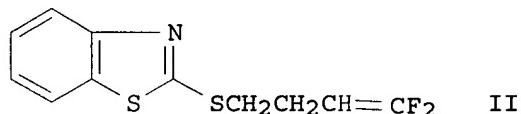
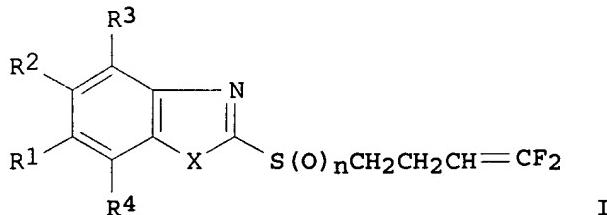
L4 ANSWER 20 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1995:289969 CAPLUS  
 DOCUMENT NUMBER: 122:56056  
 TITLE: Benzoxazole and bezothiazole derivatives  
 INVENTOR(S): Fitzjohn, Steven; Robinson, Michael Peter; Turnbull,  
 Michael Drysdale; Smith, Alison Mary; Salmon, Roger;  
 Taylor, Robin  
 PATENT ASSIGNEE(S): Zeneca Ltd., UK  
 SOURCE: PCT Int. Appl., 98 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9406782	A1	19940331	WO 1993-GB1913	19930910
W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
GB 2270689	A1	19940323	GB 1993-18738	19930909
AU 9349778	A1	19940412	AU 1993-49778	19930910
CN 1094400	A	19941102	CN 1993-119092	19930910
CN 1039415	B	19980805		
ZA 9306709	A	19950222	ZA 1993-6709	19930910
EP 660830	A1	19950705	EP 1994-910244	19930910
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				

US 5451594	A	19950919	US 1993-119917	19930910
JP 08504185	T2	19960507	JP 1994-507887	19930910
IL 106971	A1	19980615	IL 1993-106971	19930910
IL 119810	A1	19980816	IL 1993-119810	19930910
PRIORITY APPLN. INFO.:			GB 1992-19634	A 19920916
			IL 1993-106971	A3 19930910
			WO 1993-GB1913	W 19930910

OTHER SOURCE(S) : MARPAT 122:56056

GI



AB The invention provides novel 2-[(4,4-difluoro-3-but enyl)thio]benzoxazoles and -benzothiazoles I (X = oxygen, sulfur; n = 0-2; R1-R4 = H, alkyl, haloalkyl, etc.). I have properties as fungicides, nematocides and acaricides. An example compound, 2-[(4,4-difluoro-3-but enyl)thio]benzothiazole (II) was prepared in several steps. II had insecticidal activity against, for example, the aphid *Myzus persicae*.

IT 160136-15-2P, 2-[(4,4-Difluoro-3-but enyl)thio]benzothiazole

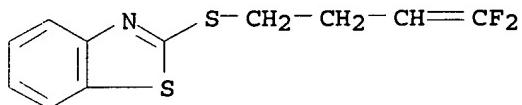
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RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn, of as acaricide fungicide nematocide)

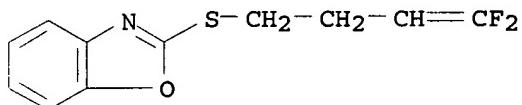
RN 160136-15-2 CAPPLUS

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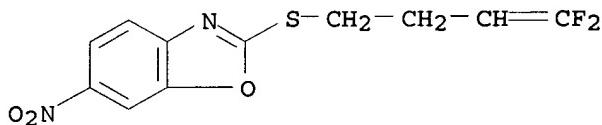
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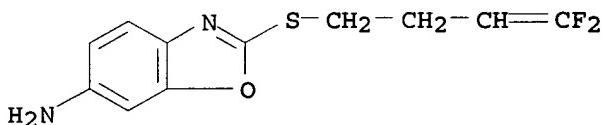
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CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-nitro- (9CI) (CA INDEX NAME)



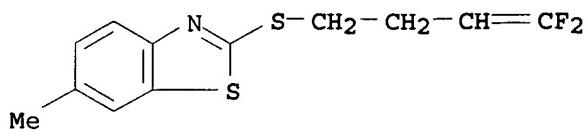
RN 160136-18-5 CAPPLUS

CN 6-Benzoxazolamine, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

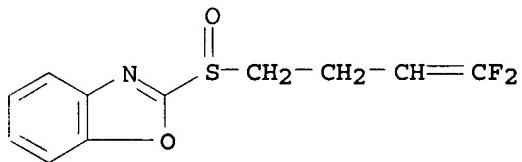


RN 160136-19-6 CAPPLUS

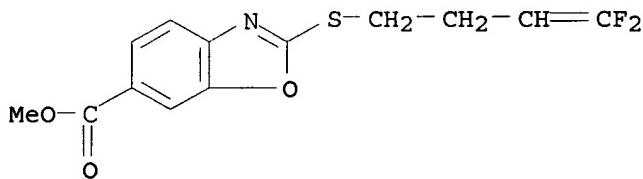
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-methyl- (9CI) (CA INDEX NAME)



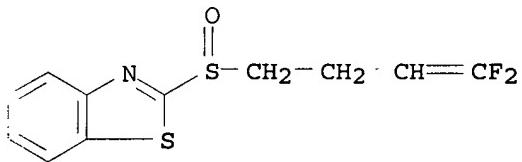
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CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



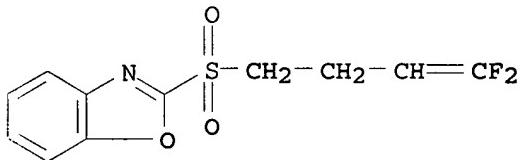
RN 160136-21-0 CAPLUS  
CN 6-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, methyl ester (9CI) (CA INDEX NAME)



RN 160136-22-1 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

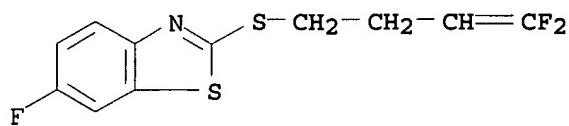


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CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)

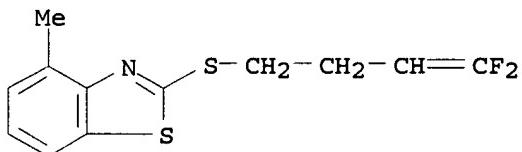


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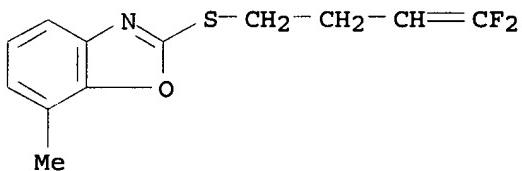
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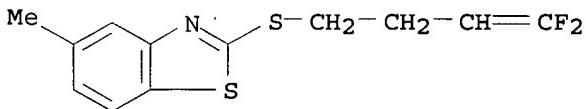
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NAME)



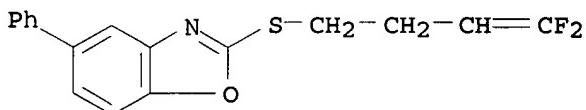
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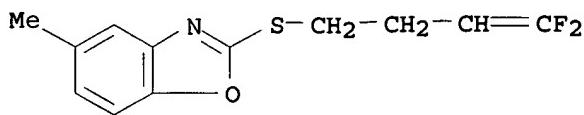
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-methyl- (9CI) (CA INDEX  
NAME)



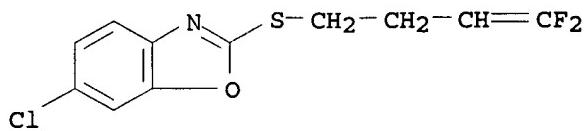
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CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-phenyl- (9CI) (CA INDEX  
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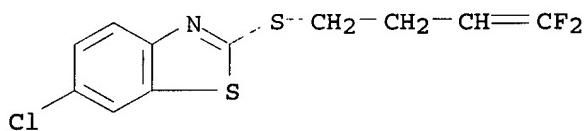
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CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-methyl- (9CI) (CA INDEX  
NAME)



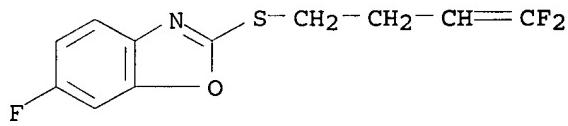
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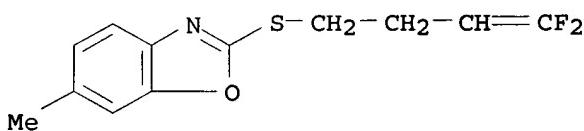
RN 160136-31-2 CAPLUS  
CN Benzothiazole, 6-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



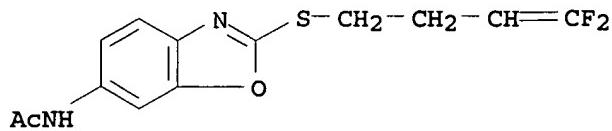
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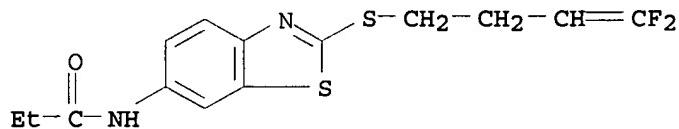
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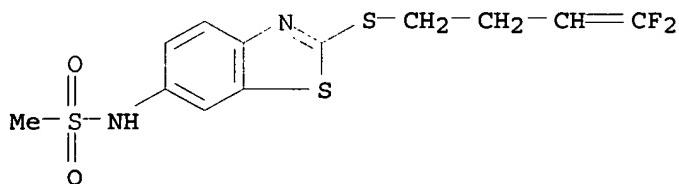
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CN Acetamide, N-[2-[(4,4-difluoro-3-butenyl)thio]-6-benzoxazolyl]- (9CI) (CA INDEX NAME)



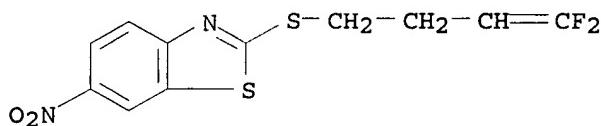
RN 160136-35-6 CAPLUS  
CN Propanamide, N-[2-[(4,4-difluoro-3-butenyl)thio]-6-benzothiazolyl]- (9CI)  
(CA INDEX NAME)



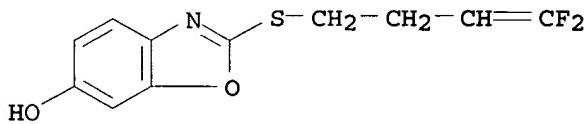
RN 160136-36-7 CAPLUS  
CN Methanesulfonamide, N-[2-[(4,4-difluoro-3-butenyl)thio]-6-benzothiazolyl]-  
(9CI) (CA INDEX NAME)



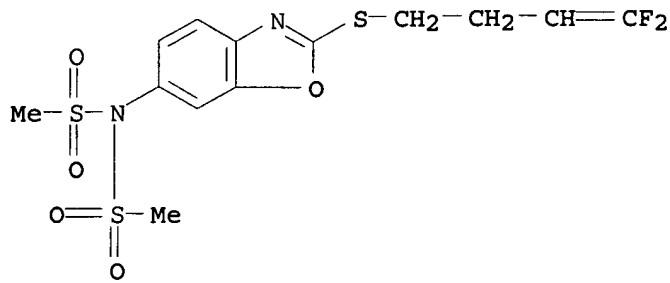
RN 160136-37-8 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-nitro- (9CI) (CA INDEX  
NAME)



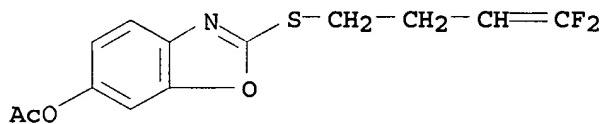
RN 160136-38-9 CAPLUS  
CN 6-Benzoxazolol, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



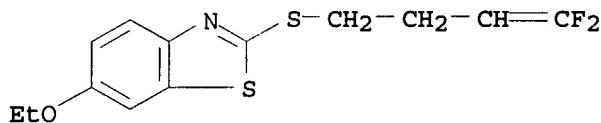
RN 160136-39-0 CAPLUS  
CN Methanesulfonamide, N-[2-[(4,4-difluoro-3-butenyl)thio]-6-benzoxazolyl]-N-  
(methylsulfonyl)- (9CI) (CA INDEX NAME)



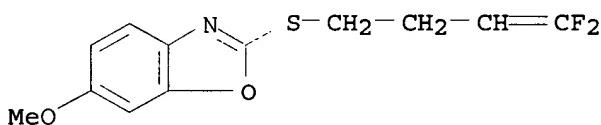
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CN 6-Benzoxazolol, 2-[(4,4-difluoro-3-butenyl)thio]-, acetate (ester) (9CI)  
(CA INDEX NAME)



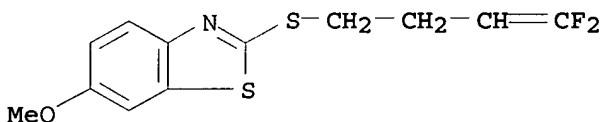
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-ethoxy- (9CI) (CA INDEX NAME)



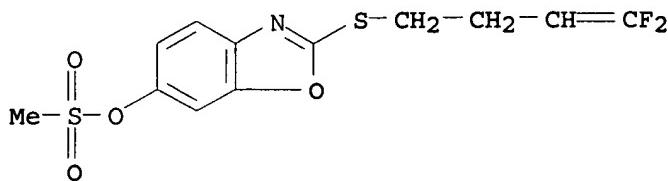
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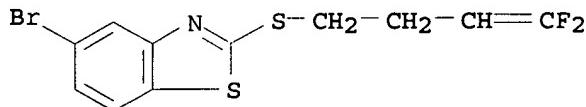
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-methoxy- (9CI) (CA INDEX NAME)



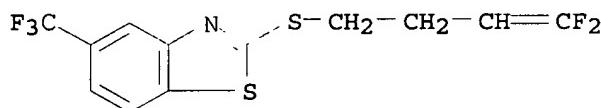
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CN 6-Benzoxazolol, 2-[(4,4-difluoro-3-butenyl)thio]-, methanesulfonate (ester) (9CI) (CA INDEX NAME)



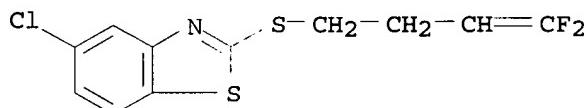
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CN Benzothiazole, 5-bromo-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



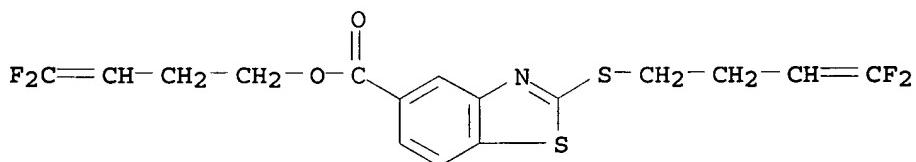
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CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-(trifluoromethyl)- (9CI) (CA INDEX NAME)



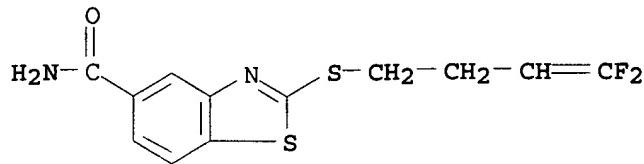
RN 160136-47-0 CAPLUS  
CN Benzothiazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 160136-48-1 CAPLUS  
CN 5-Benzothiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, 4,4-difluoro-3-butene ester (9CI) (CA INDEX NAME)

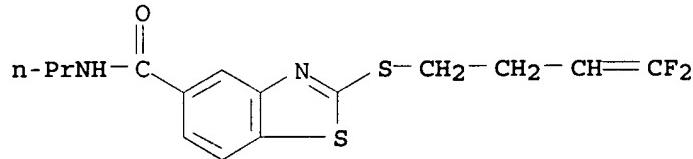


RN 160136-49-2 CAPLUS  
CN 5-Benzothiazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



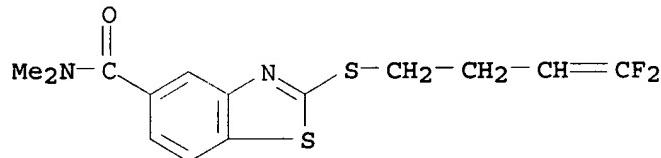
RN 160136-50-5 CAPLUS

CN 5-Benzothiazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]-N-propyl-  
(9CI) (CA INDEX NAME)



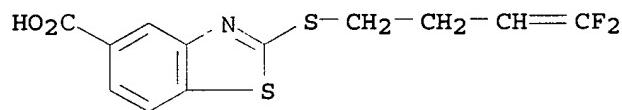
RN 160136-51-6 CAPLUS

CN 5-Benzothiazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]-N,N-dimethyl-  
(9CI) (CA INDEX NAME)



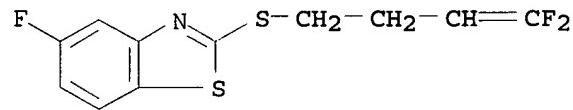
RN 160136-52-7 CAPLUS

CN 5-Benzothiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



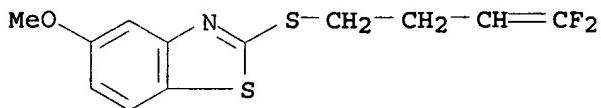
RN 160136-53-8 CAPLUS

CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-fluoro- (9CI) (CA INDEX  
NAME)



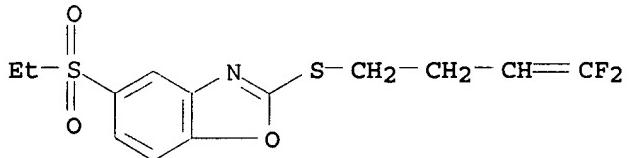
RN 160136-54-9 CAPLUS

CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-methoxy- (9CI) (CA  
INDEX NAME)



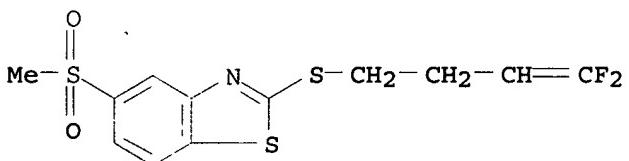
RN 160136-55-0 CAPLUS

CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-(ethylsulfonyl)- (9CI)  
(CA INDEX NAME)



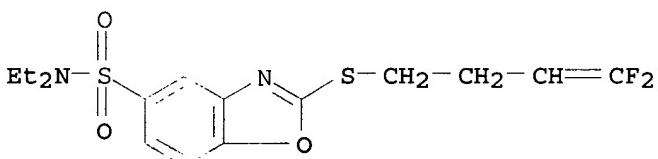
RN 160136-56-1 CAPLUS

CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-(methylsulfonyl)- (9CI)  
(CA INDEX NAME)



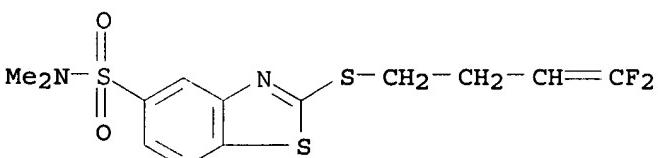
RN 160136-57-2 CAPLUS

CN 5-Benzoxazolesulfonamide, 2-[(4,4-difluoro-3-butenyl)thio]-N,N-diethyl-  
(9CI) (CA INDEX NAME)



RN 160136-58-3 CAPLUS

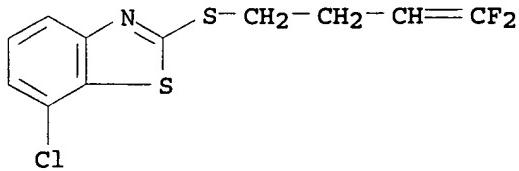
CN 5-Benzothiazolesulfonamide, 2-[(4,4-difluoro-3-butenyl)thio]-N,N-dimethyl-  
(9CI) (CA INDEX NAME)



RN 160136-59-4 CAPLUS

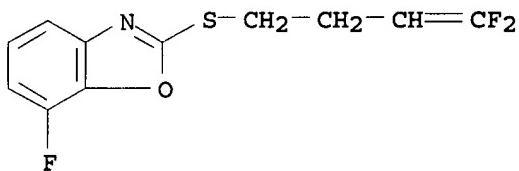
10518454.trn

CN Benzothiazole, 7-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX  
NAME)



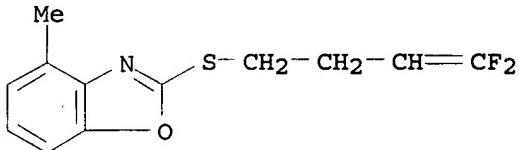
RN 160136-60-7 CAPLUS

CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-7-fluoro- (9CI) (CA INDEX  
NAME)



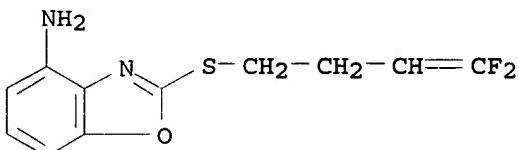
RN 160136-61-8 CAPLUS

CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX  
NAME)



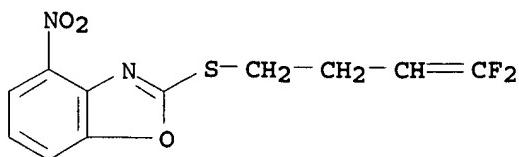
RN 160136-62-9 CAPLUS

CN 4-Benzoxazolamine, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX  
NAME)

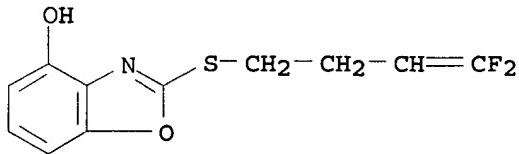


RN 160136-63-0 CAPLUS

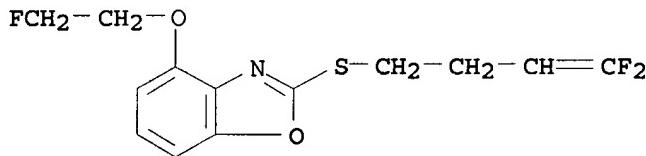
CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-nitro- (9CI) (CA INDEX  
NAME)



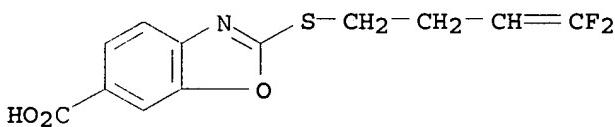
RN 160136-64-1 CAPLUS  
CN 4-Benzoxazolol, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



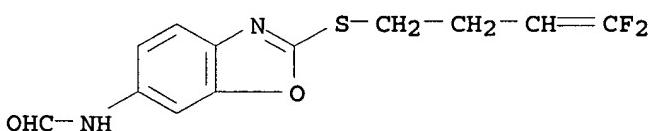
RN 160136-65-2 CAPLUS  
CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-(2-fluoroethoxy)- (9CI)  
(CA INDEX NAME)



RN 160136-66-3 CAPLUS  
CN 6-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

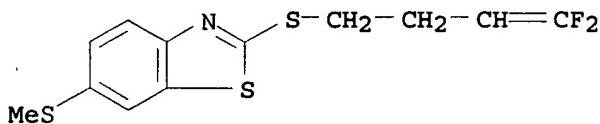


RN 160136-67-4 CAPLUS  
CN Formamide, N-[2-[(4,4-difluoro-3-butenyl)thio]-6-benzoxazolyl]- (9CI) (CA INDEX NAME)



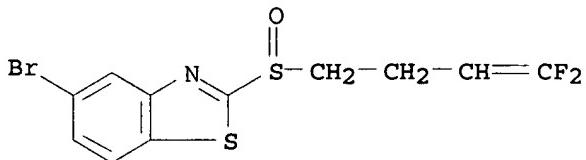
RN 160136-68-5 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-(methylthio)- (9CI) (CA INDEX NAME)

INDEX NAME)



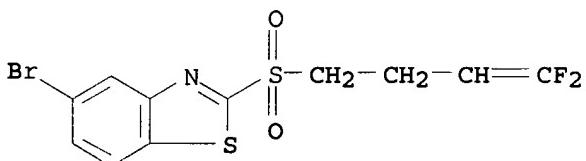
RN 160136-69-6 CAPLUS

CN Benzothiazole, 5-bromo-2-[(4,4-difluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



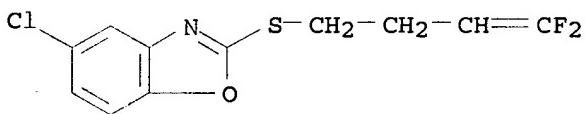
RN 160136-70-9 CAPLUS

CN Benzothiazole, 5-bromo-2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



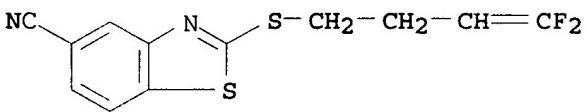
RN 160136-71-0 CAPLUS

CN Benzoxazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



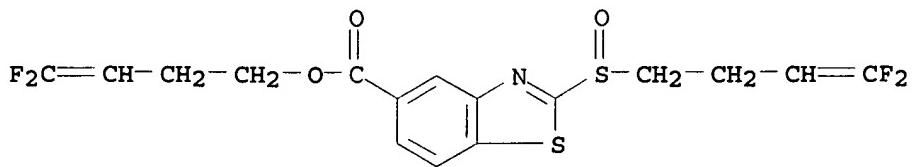
RN 160136-72-1 CAPLUS

CN 5-Benzothiazolecarbonitrile, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

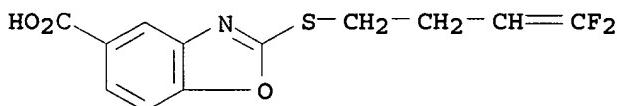


RN 160136-73-2 CAPLUS

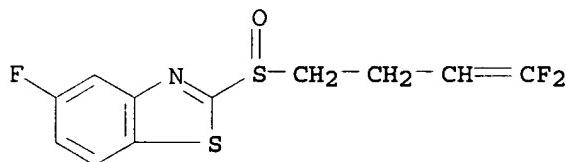
CN 5-Benzothiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-, 4,4-difluoro-3-butene-1-ester (9CI) (CA INDEX NAME)



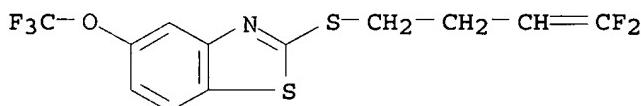
RN 160136-74-3 CAPLUS  
CN 5-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA  
INDEX NAME)



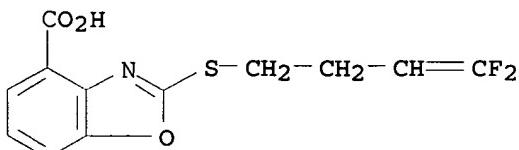
RN 160136-75-4 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-5-fluoro- (9CI) (CA INDEX NAME)



RN 160136-76-5 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-(trifluoromethoxy)-  
(9CI) (CA INDEX NAME)

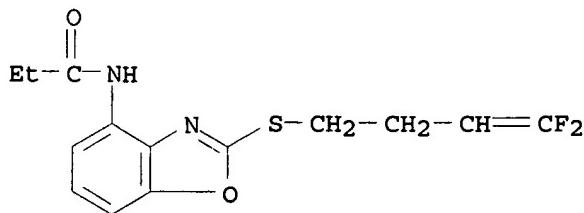


RN 160136-77-6 CAPLUS  
CN 4-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA  
INDEX NAME)

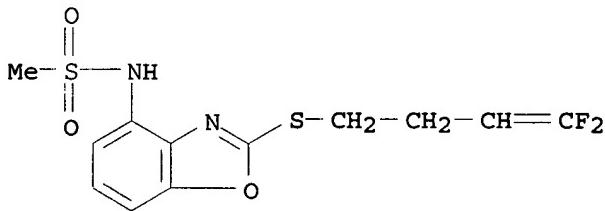


RN 160136-78-7 CAPLUS  
CN Propanamide, N-[2-[(4,4-difluoro-3-but enyl)thio]-4-benzoxazolyl]- (9CI)

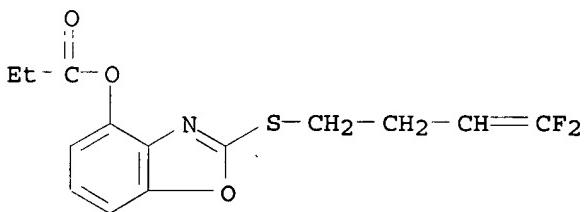
(CA INDEX NAME)



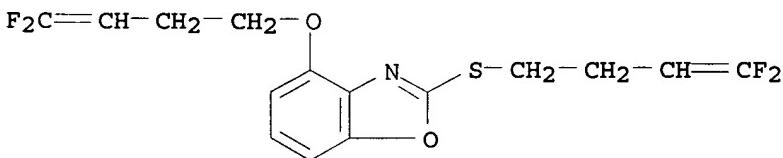
RN 160136-79-8 CAPLUS  
 CN Methanesulfonamide, N-[2-[(4,4-difluoro-3-butenyl)thio]-4-benzoxazolyl]-  
 (9CI) (CA INDEX NAME)



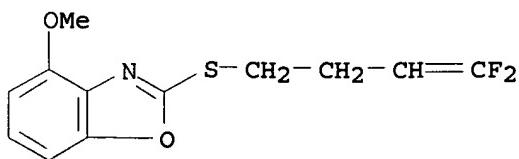
RN 160136-80-1 CAPLUS  
 CN 4-Benzoxazolol, 2-[(4,4-difluoro-3-but enyl)thio]-, propanoate (ester)  
 (9CI) (CA INDEX NAME)



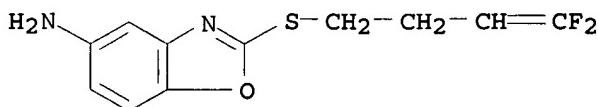
RN 160136-81-2 CAPLUS  
 CN Benzoxazole, 4-[(4,4-difluoro-3-but enyl)oxy]-2-[(4,4-difluoro-3-  
 but enyl)thio]- (9CI) (CA INDEX NAME)



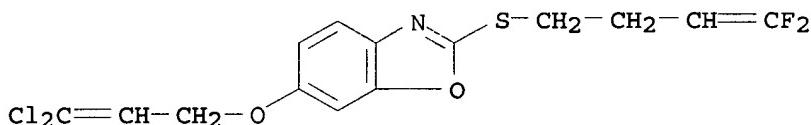
RN 160136-82-3 CAPLUS  
 CN Benzoxazole, 2-[(4,4-difluoro-3-but enyl)thio]-4-methoxy- (9CI) (CA INDEX  
 NAME)



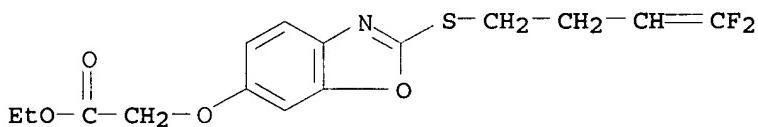
RN 160136-83-4 CAPLUS  
CN 5-Benzoxazolamine, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



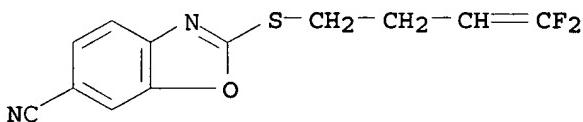
RN 160136-84-5 CAPLUS  
CN Benzoxazole, 6-[(3,3-dichloro-2-propenyl)oxy]-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



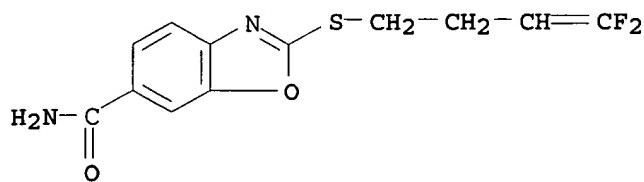
RN 160136-85-6 CAPLUS  
CN Acetic acid, [2-[(4,4-difluoro-3-butenyl)thio]-6-benzoxazolyl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)



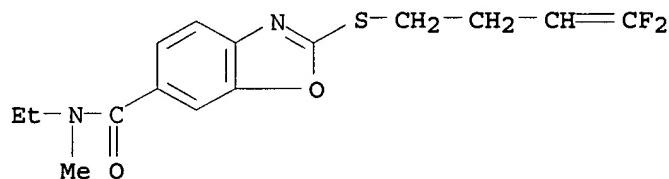
RN 160136-86-7 CAPLUS  
CN 6-Benzoxazolecarbonitrile, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



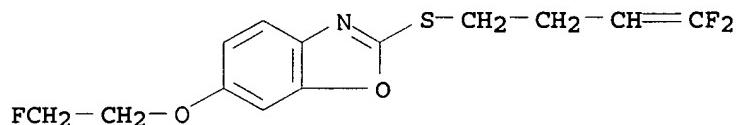
RN 160136-87-8 CAPLUS  
CN 6-Benzoxazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



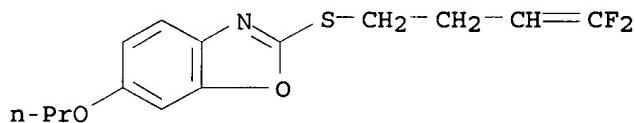
RN 160136-88-9 CAPLUS  
CN 6-Benzoxazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]-N-ethyl-N-methyl- (9CI) (CA INDEX NAME)



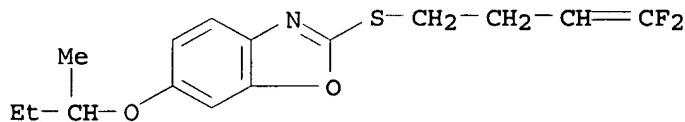
RN 160136-89-0 CAPLUS  
CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-(2-fluoroethoxy)- (9CI) (CA INDEX NAME)



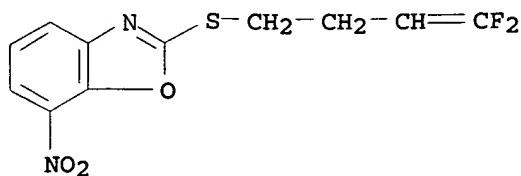
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CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-propoxy- (9CI) (CA INDEX NAME)



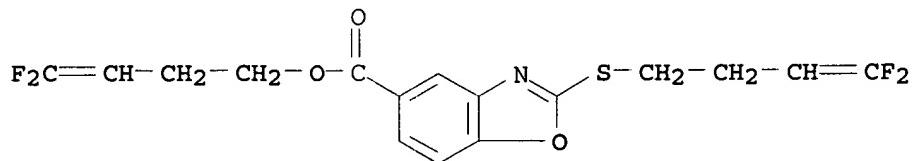
RN 160136-91-4 CAPLUS  
CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-(1-methylpropoxy)- (9CI) (CA INDEX NAME)



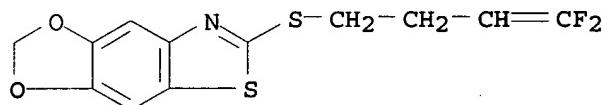
RN 160136-92-5 CAPLUS  
CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-7-nitro- (9CI) (CA INDEX NAME)



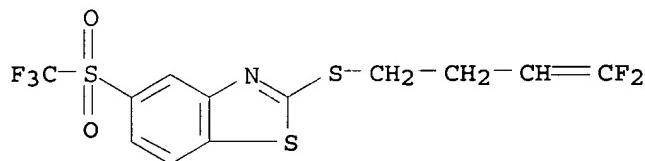
RN 160136-93-6 CAPLUS  
CN 5-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, 4,4-difluoro-3-butenyl ester (9CI) (CA INDEX NAME)



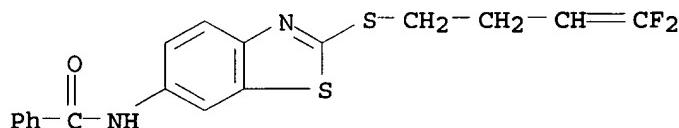
RN 160136-94-7 CAPLUS  
CN 1,3-Dioxolo[4,5-f]benzothiazole, 6-[(4,4-difluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



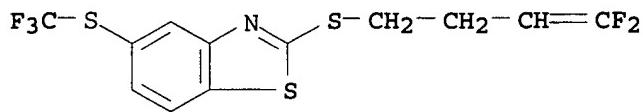
RN 160136-95-8 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-but enyl)thio]-5-[(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)



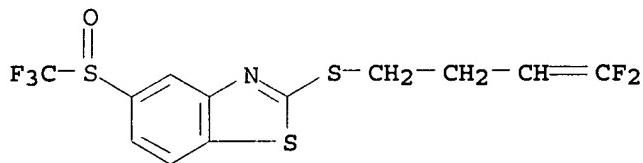
RN 160136-96-9 CAPLUS  
CN Benzamide, N-[2-[(4,4-difluoro-3-but enyl)thio]-6-benzothiazolyl]- (9CI) (CA INDEX NAME)



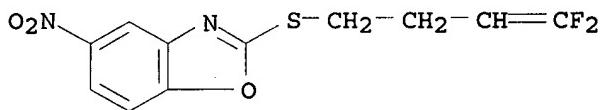
RN 160136-97-0 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-but enyl)thio]-5-[(trifluoromethyl)thio]- (9CI) (CA INDEX NAME)



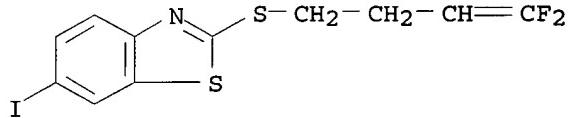
RN 160136-98-1 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-(trifluoromethyl)sulfanyl- (9CI) (CA INDEX NAME)



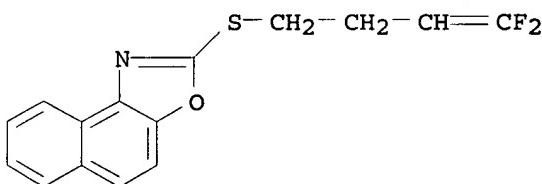
RN 160136-99-2 CAPLUS  
CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-nitro- (9CI) (CA INDEX NAME)



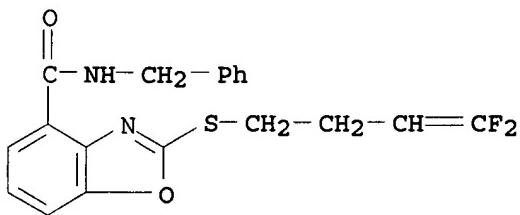
RN 160137-00-8 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-iodo- (9CI) (CA INDEX NAME)



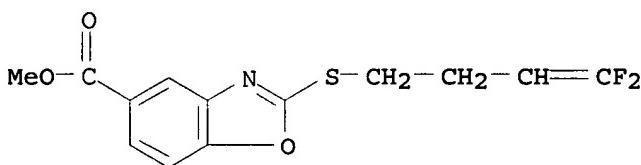
RN 160137-01-9 CAPLUS  
CN Naphth[1,2-d]oxazole, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



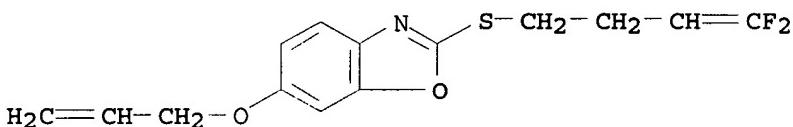
RN 160137-02-0 CAPLUS  
CN 4-Benzoxazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]-N-(phenylmethyl)- (9CI) (CA INDEX NAME)



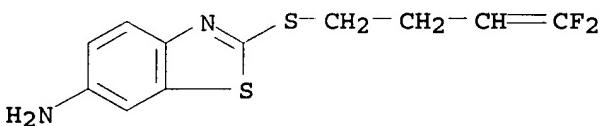
RN 160137-03-1 CAPLUS  
CN 5-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, methyl ester (9CI) (CA INDEX NAME)



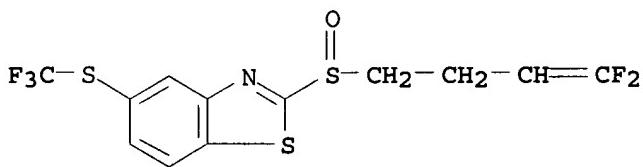
RN 160137-04-2 CAPLUS  
CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-(2-propenyl)- (9CI) (CA INDEX NAME)



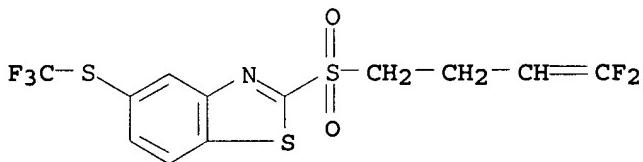
RN 160137-05-3 CAPLUS  
CN 6-Benzothiazolamine, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



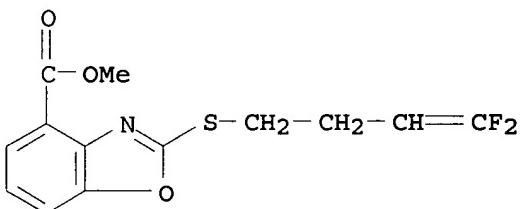
RN 160137-06-4 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-5-[(trifluoromethyl)thio]- (9CI) (CA INDEX NAME)



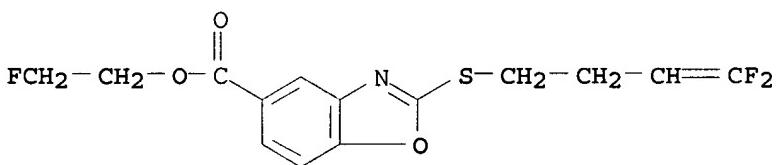
RN 160137-07-5 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-5-[(trifluoromethyl)thio]- (9CI) (CA INDEX NAME)



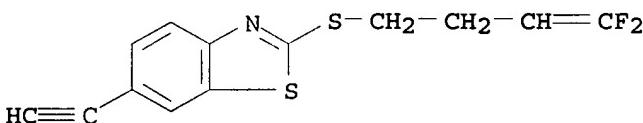
RN 160137-08-6 CAPLUS  
CN 4-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, methyl ester (9CI) (CA INDEX NAME)



RN 160137-09-7 CAPLUS  
CN 5-Benzoxazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, 2-fluoroethyl ester (9CI) (CA INDEX NAME)

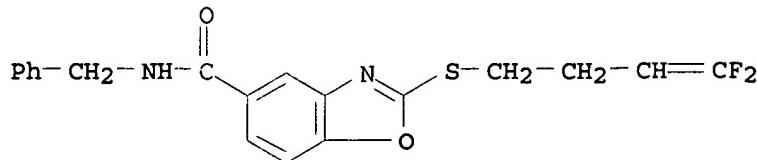


RN 160137-10-0 CAPLUS  
CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]-6-ethynyl- (9CI) (CA INDEX NAME)



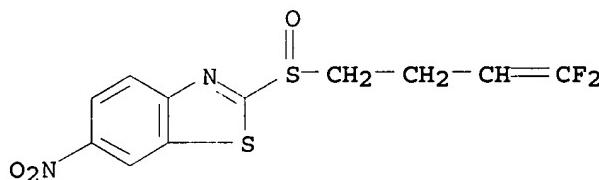
RN 160137-11-1 CAPLUS

CN 5-Benzoxazolecarboxamide, 2-[(4,4-difluoro-3-butenyl)thio]-N-(phenylmethyl)- (9CI) (CA INDEX NAME)



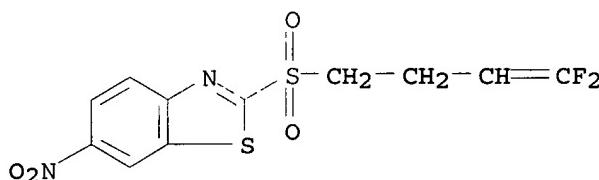
RN 160137-12-2 CAPLUS

CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-6-nitro- (9CI) (CA INDEX NAME)



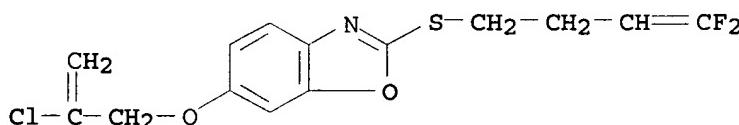
RN 160137-13-3 CAPLUS

CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-6-nitro- (9CI) (CA INDEX NAME)



RN 160137-22-4 CAPLUS

CN Benzoxazole, 6-[(2-chloro-2-propenyl)oxy]-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

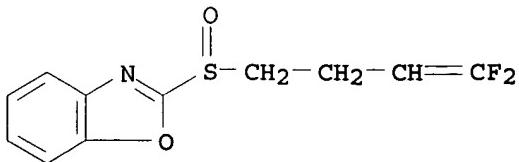


IT 160136-20-9P 160136-23-2P

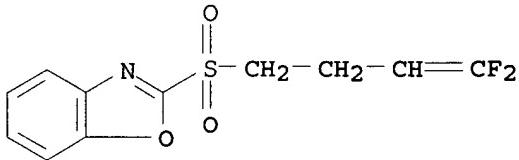
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as intermediate for [(difluorobutenyl)thio]benzoxazole or -benzothiaazole)

RN 160136-20-9 CAPLUS

CN Benzoxazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

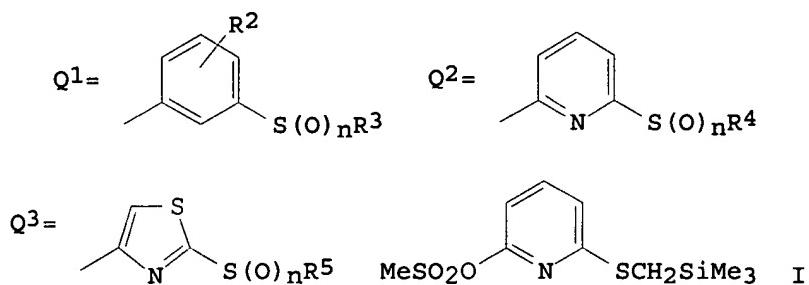


RN 160136-23-2 CAPLUS  
 CN Benzoxazole, 2-[(4,4-difluoro-3-butenoxy)sulfonyl]- (9CI) (CA INDEX NAME)

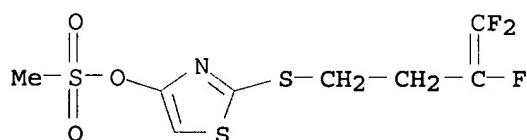


L4 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1994:164164 CAPLUS  
 DOCUMENT NUMBER: 120:164164  
 TITLE: Preparation of arthropodicidal aryl and heteroaryl sulfonates  
 INVENTOR(S): Lahm, George Philip  
 PATENT ASSIGNEE(S): Dunlena Pty. Ltd., Australia  
 SOURCE: PCT Int. Appl., 36 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

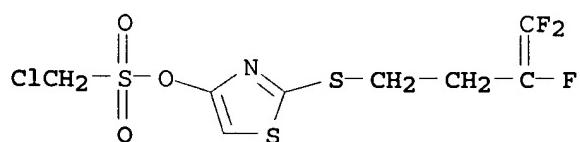
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9321150	A2	19931028	WO 1993-US3205	19930406
WO 9321150	A3	19931125		
W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9342789	A1	19931118	AU 1993-42789	19930406
CN 1079217	A	19931208	CN 1993-103726	19930410
PRIORITY APPLN. INFO.:			US 1992-866671	A2 19920410
			WO 1993-US3205	A 19930406
OTHER SOURCE(S):	MARPAT	120:164164		
GI				



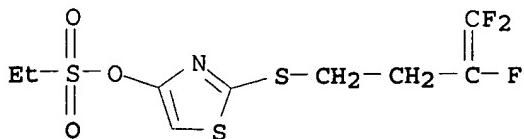
- AB** Title compds.  $\text{R}_1\text{SO}_2\text{OQ}$  ( $\text{R}_1$  = (halo) C1-3 alkyl;  $\text{Q} = Q^1, Q^2, Q^3$ ;  $\text{R}^2 = \text{H}$ , (halo) C1-2 alkyl, (halo) C1-2 alkoxy, (halo) C1-2 alkylthio, (halo) C1-2 alkylsulfonyl, (halo) C1-2 alkylsulfonyl, NC, O<sub>2</sub>N, (halo) Ph;  $\text{R}^3$  = (substituted) C1-6 alkyl, (substituted) C3-6 alkenyl, (substituted) C3-6 alkynyl, etc.;  $\text{R}^4, \text{R}^5$  = (substituted) C1-6 alkyl, (substituted) C2-6 alkenyl, (substituted) C2-6 alkynyl), are prepared To NaH in DMF was added 4-(MeO)C<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>SH in DMF followed by 2-chloro-6-methoxypyridine which with anisole and F<sub>3</sub>CCO<sub>2</sub>H were refluxed to give 6-methyl-2-pyridinethiol. This, K<sub>2</sub>CO<sub>3</sub> and ClCH<sub>2</sub>SiMe<sub>3</sub> in DMF were heated at 60° to give 2-methoxy-6-[(trimethylsilyl)methyl]pyridine which in AcOH and HBr was refluxed for 2 h to which was added MeSO<sub>2</sub>Cl to give the title compound I. I at 0.55 kg/h gave 80% or higher mortality against southern corn rootworm larvae. Addnl. title compds. were prepared and tested for arthropodicidal activity.  
**IT** 153508-31-7P 153508-37-3P 153538-41-1P  
**RL:** SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, as arthropodicide)  
**RN** 153508-31-7 CAPLUS  
**CN** 4-Thiazolol, 2-[(3,4,4-trifluoro-3-butenyl)thio]-, methanesulfonate (ester) (9CI) (CA INDEX NAME)



- RN** 153508-37-3 CAPLUS  
**CN** Methanesulfonic acid, chloro-, 2-[(3,4,4-trifluoro-3-butenyl)thio]-4-thiazolyl ester (9CI) (CA INDEX NAME)



- RN** 153538-41-1 CAPLUS  
**CN** Ethanesulfonic acid, 2-[(3,4,4-trifluoro-3-butenyl)thio]-4-thiazolyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:38914 CAPLUS

DOCUMENT NUMBER: 118:38914

TITLE: Benzoxazole derivatives useful as nematicides, and their preparation

INVENTOR(S): Turnbull, Michael Drysdale

PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK

SOURCE: Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

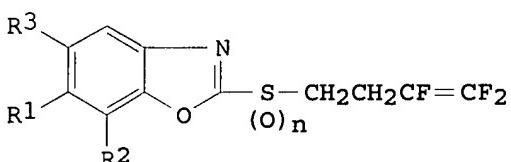
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 507464	A1	19921007	EP 1992-302217	19920313
R: PT				
CA 2083691	AA	19920929	CA 1992-2083691	19920317
WO 9217463	A1	19921015	WO 1992-GB475	19920317
W: AU, BG, BR, CA, CS, HU, JP, KR, MW, RO, RU, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN,				
GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG				
AU 9215428	A1	19921102	AU 1992-15428	19920317
EP 532722	A1	19930324	EP 1992-906653	19920317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
BR 9205230	A	19930831	BR 1992-5230	19920317
JP 05509335	T2	19931222	JP 1992-506392	19920317
US 5273988	A	19931228	US 1992-854144	19920318
PRIORITY APPLN. INFO.:			GB 1991-6655	A 19910328
			GB 1991-6656	A 19910328
			WO 1992-GB475	A 19920317

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AB Fifteen benzoxazoles I [R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> = H, alkyl, alkenyl, alkynyl, cycloalkyl, alkylcycloalkyl, halo, haloalkyl, alkoxy, alkenyloxy, alkoxyalkyl, haloalkoxy, alkylthio, cyano, nitro, amino, NR<sub>5</sub>R<sub>6</sub>, OH, acylamino, CO<sub>2</sub>R<sub>4</sub>; or R<sub>1</sub>R<sub>3</sub> = atoms to form 5- or 6-membered ring; R<sub>4</sub>, R<sub>6</sub> = H, C<sub>1-4</sub> alkyl; R<sub>5</sub> = C<sub>1-4</sub> alkyl; n = 0, 1; provided that R<sub>1</sub>-R<sub>3</sub> are not all H when n = 0] were prepared. For example, cyclization of 2-amino-5-methoxyphenol-HCl with thiophosgene (in solution, exothermic) gave 30% 6-methoxy-2-mercaptopbenzoxazole, which reacted with BrCH<sub>2</sub>CH<sub>2</sub>CF:CF<sub>2</sub> and

K<sub>2</sub>CO<sub>3</sub> in Me<sub>2</sub>CO to give 59% I (R<sub>1</sub> = OMe, R<sub>2</sub> = R<sub>3</sub> = H, n = 0) (II). In tests on tomato plants, II at 2.5 ppm (soil drench) gave 98% reduction of root knots from *Meloidogyne incognita*, and at 20 ppm gave 100% reduction of cysts from *Globodera rostochiensis*. I show very little phytotoxicity, and are also useful against insects and acarids (no data).

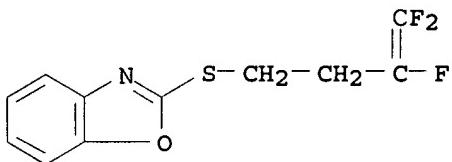
IT 27443-03-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and S-oxidation of, as intermediate for nematicides)

RN 27443-03-4 CAPLUS

CN Benzoxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



IT 145096-42-0P 145096-43-1P 145096-44-2P

145096-45-3P 145096-46-4P 145096-47-5P

145096-48-6P 145096-49-7P 145096-50-0P

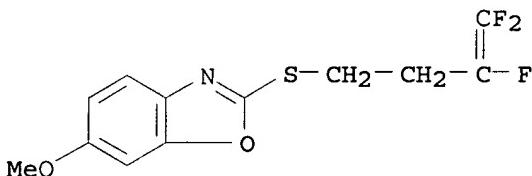
145096-51-1P 145096-52-2P 145096-53-3P

145096-54-4P 145096-55-5P 145096-56-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as nematicide)

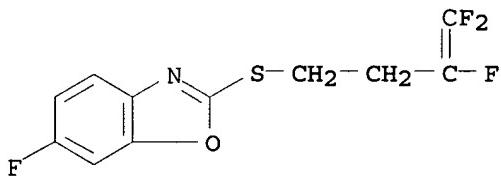
RN 145096-42-0 CAPLUS

CN Benzoxazole, 6-methoxy-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



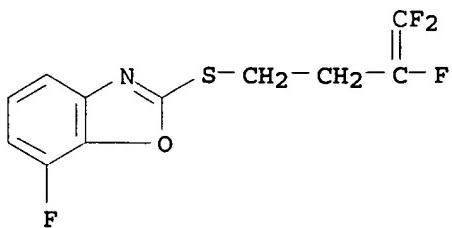
RN 145096-43-1 CAPLUS

CN Benzoxazole, 6-fluoro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

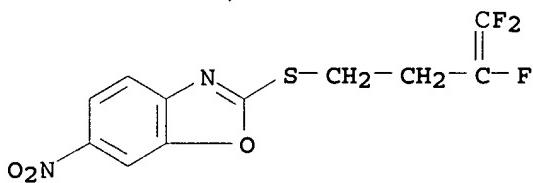


RN 145096-44-2 CAPLUS

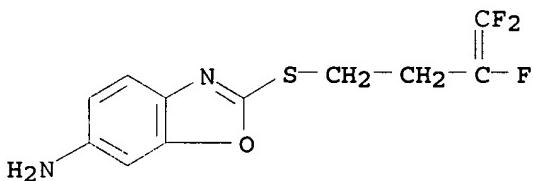
CN Benzoxazole, 7-fluoro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



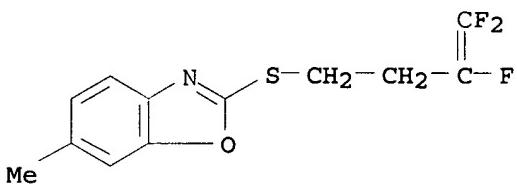
RN 145096-45-3 CAPLUS  
CN Benzoxazole, 6-nitro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



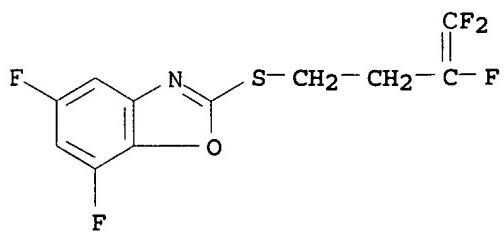
RN 145096-46-4 CAPLUS  
CN 6-Benzoxazolamine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



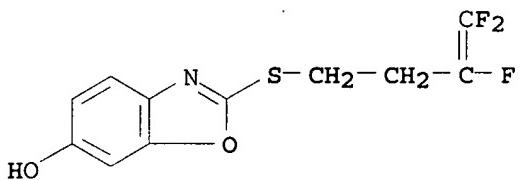
RN 145096-47-5 CAPLUS  
CN Benzoxazole, 6-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



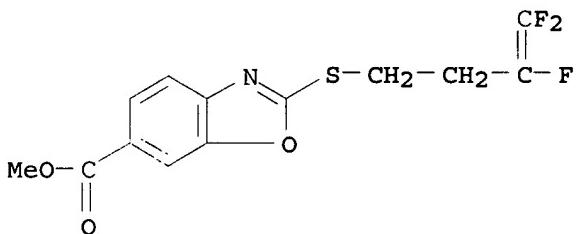
RN 145096-48-6 CAPLUS  
CN Benzoxazole, 5,7-difluoro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



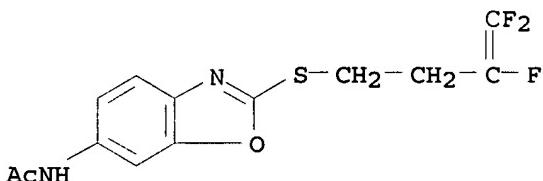
RN 145096-49-7 CAPLUS  
CN 6-Benzoxazolol, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



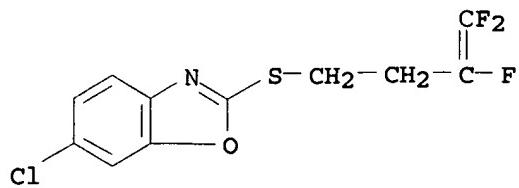
RN 145096-50-0 CAPLUS  
CN 6-Benzoxazolecarboxylic acid, 2-[(3,4,4-trifluoro-3-butenyl)thio]-, methyl ester (9CI) (CA INDEX NAME)



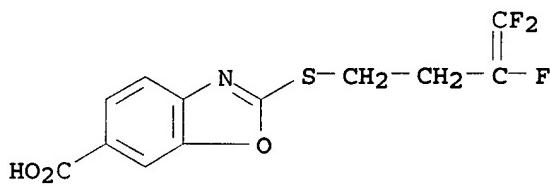
RN 145096-51-1 CAPLUS  
CN Acetamide, N-[2-[(3,4,4-trifluoro-3-butenyl)thio]-6-benzoxazolyl]- (9CI) (CA INDEX NAME)



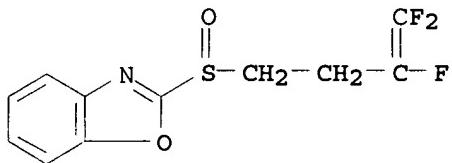
RN 145096-52-2 CAPLUS  
CN Benzoxazole, 6-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



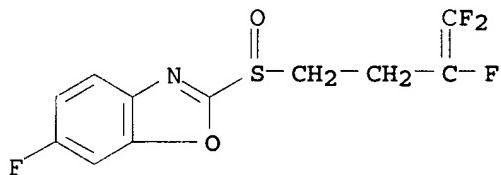
RN 145096-53-3 CAPLUS  
CN 6-Benzoxazolecarboxylic acid, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



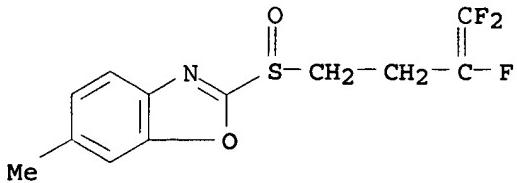
RN 145096-54-4 CAPLUS  
CN Benzoxazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 145096-55-5 CAPLUS  
CN Benzoxazole, 6-fluoro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



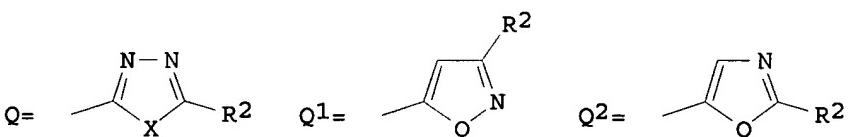
RN 145096-56-6 CAPLUS  
CN Benzoxazole, 6-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1990:198390 CAPLUS  
DOCUMENT NUMBER: 112:198390  
TITLE: Substituted azole thioethers, their preparation and use as pesticides  
INVENTOR(S): Huebl, Dieter; Buehmann, Ulrich; Pieroh, Ernst;  
Joppien, Hartmut  
PATENT ASSIGNEE(S): Schering A.-G., Fed. Rep. Ger.  
SOURCE: Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 342150	A1	19891115	EP 1989-730118	19890510
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
DE 3816807	A1	19891123	DE 1988-3816807	19880513
DE 3820456	A1	19891214	DE 1988-3820456	19880613
DE 3820628	A1	19891221	DE 1988-3820628	19880615
DE 3824879	A1	19900215	DE 1988-3824879	19880719
AU 8934576	A1	19891116	AU 1989-34576	19890509
DK 8902310	A	19891114	DK 1989-2310	19890511
FI 8902289	A	19891114	FI 1989-2289	19890511
DD 285977	A5	19910110	DD 1989-328523	19890511
HU 50143	A2	19891228	HU 1989-2396	19890512
BR 8902240	A	19900109	BR 1989-2240	19890512
ZA 8903575	A	19900131	ZA 1989-3575	19890512
CN 1037632	A	19891206	CN 1989-103287	19890513
JP 02085267	A2	19900326	JP 1989-118853	19890515
PRIORITY APPLN. INFO.:			DE 1988-3816807	A 19880513
			DE 1988-3820456	A 19880613
			DE 1988-3820628	A 19880615
			DE 1988-3824879	A 19880719

OTHER SOURCE(S) : CASREACT 112:198390; MARPAT 112:198390  
GI



**AB**    ASR1 (I; A = azolyl groups Q - Q2; R1 = BrCF<sub>2</sub>, CF<sub>3</sub>CH<sub>2</sub>, BrCF<sub>2</sub>CF<sub>2</sub>,

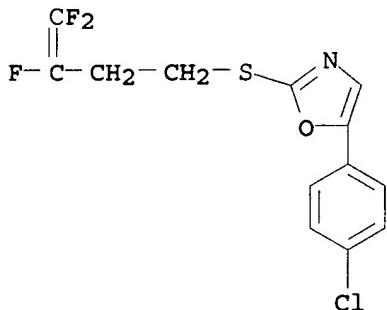
10518454.trn

HCF<sub>2</sub>CF<sub>2</sub>CH<sub>2</sub>, FCH<sub>2</sub>CH<sub>2</sub>, (un)substituted C<sub>1</sub>-12 alkyl, (un)substituted C<sub>2</sub>-12 alkenyl; R<sub>2</sub> = (un)substituted Ph, biphenyl, naphthyl, substituted phenoxy, -phenylthio; X = O, S) were prepared At 5-10° 5-(4-chlorophenyl)-1,3,4-thiazole-2-thiol in DMF was added NaH in paraffin and the mixture stirred for 30 min at 10°. CBr<sub>2</sub>F<sub>2</sub> was added dropwise and the mixture stirred for 3 h at 10° to give I (A = Q; X = S; R<sub>1</sub> = BrF<sub>2</sub>C; R<sub>2</sub> = 4-ClC<sub>6</sub>H<sub>4</sub>) (II). Nematode attack by Meloidogyne incognita was 100% controlled by II at 25 mg/L soil.

IT 126767-55-3P 126767-56-4P  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as pesticide)

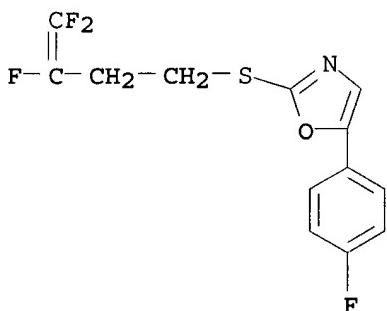
RN 126767-55-3 CAPLUS

CN Oxazole, 5-(4-chlorophenyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
 (CA INDEX NAME)



RN 126767-56-4 CAPLUS

CN Oxazole, 5-(4-fluorophenyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
 (CA INDEX NAME)



L4 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:496721 CAPLUS

DOCUMENT NUMBER: 107:96721

TITLE: Pesticidal (thiadiazolylthio)trifluorobutene analogs

INVENTOR(S): Cullen, Thomas Gerard; Martinez, Anthony Joseph

PATENT ASSIGNEE(S): FMC Corp., USA

SOURCE: PCT Int. Appl., 102 pp.

CODEN: PIXXD2

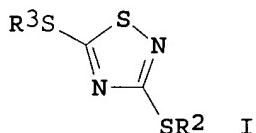
DOCUMENT TYPE: Patent

LANGUAGE: English

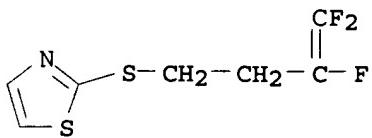
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8607590	A1	19861231	WO 1986-US1284	19860612
W: AU, BR, DK, HU, JP, KR RW: CF, CG, CH, CM, DE, FR, GA, GB, IT, ML, MR, NL, SN, TD, TG				
AU 8661229	A1	19870113	AU 1986-61229	19860612
AU 601656	B2	19900913		
EP 228447	A1	19870715	EP 1986-904515	19860612
R: CH, DE, FR, GB, IT, LI, NL				
HU 42424	A2	19870728	HU 1986-3254	19860612
HU 204022	B	19911128		
BR 8606746	A	19871013	BR 1986-6746	19860612
JP 63500037	T2	19880107	JP 1986-503571	19860612
CA 1277668	A1	19901211	CA 1986-511879	19860618
CN 86104207	A	19870401	CN 1986-104207	19860619
ZA 8604637	A	19880224	ZA 1986-4637	19860620
DK 8700843	A	19870219	DK 1987-843	19870219
US 4952580	A	19900828	US 1988-270903	19881109
PRIORITY APPLN. INFO.:			US 1985-746911	A 19850620
			US 1985-747142	A 19850620
			US 1986-870055	B1 19860603
			WO 1986-US1284	A 19860612
			US 1988-161575	B2 19880229

OTHER SOURCE(S) : MARPAT 107:96721  
GI

- AB F2C:CF(CH<sub>2</sub>)<sub>n</sub>ZR [n = 1-4; Z = S, O, N, CH<sub>2</sub>; when Z = S, R = thiazolyl, F2C:CFCH<sub>2</sub>CH<sub>2</sub>O<sub>2</sub>CCH<sub>2</sub>, or (un)substituted thiienyl, thianaphthyl, thiazolinyl, thiadiazolyl, and oxadiazolyl; when Z = O, R = COR<sub>1</sub> where R<sub>1</sub> = perfluoroalkyl, dihydrothiazolylthiomethyl, or (un)substituted Ph, thiienyl, furanyl, pyrrolyl; when Z = N, ZR = isothiocyanato, succinimido, or saccharin group; when Z = CH<sub>2</sub>, R = OH], useful as pesticides, were prepared Refluxing a mixture of 0.08 mol NCN:C(S-K<sup>+</sup>)<sub>2</sub> and 0.08 mol S in MeOH gave 18.1 g thiadiazole derivative I (R<sub>2</sub> = R<sub>3</sub> = K), which was alkylated by BrCH<sub>2</sub>CH<sub>2</sub>CF:CF<sub>2</sub> in MeCOEt to give I (R<sub>2</sub> = R<sub>3</sub> = CH<sub>2</sub>CH<sub>2</sub>CF:CF<sub>2</sub>), which at 5 ppm completely controlled the root-knot nematode.
- IT 109993-23-9P  
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as pesticide)
- RN 109993-23-9 CAPLUS
- CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 25 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1975:593289 CAPLUS  
 DOCUMENT NUMBER: 83:193289  
 TITLE: Trifluorobutenyl compounds and their use as nematocides  
 INVENTOR(S): Brokke, Marvin E.  
 PATENT ASSIGNEE(S): Stauffer Chemical Co., USA  
 SOURCE: U. S. Publ. Pat. Appl. B, 3 pp. Avail. U.S. Pat. Trademark Off. Division of U.S. 3,780,050 (CA 80;82988s).  
 CODEN: USXXDP  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 5  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 354979	A1	19750128	US 1973-354979	19730427
US 3914251	A	19751021		
US 3513172	A	19700519	US 1965-490664	19650927
US 3697536	A	19721010	US 1969-877538	19691120
US 3780050	A	19731218	US 1971-208032	19711208
PRIORITY APPLN. INFO.:			US 1965-490664	A3 19650927
			US 1969-877538	A3 19691120
			US 1971-208032	A3 19711208

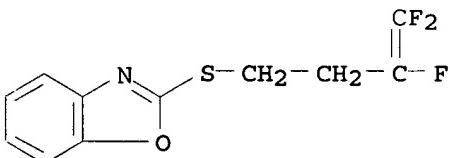
AB The title compds. F2C:CFCH<sub>2</sub>CH<sub>2</sub>SR (I; R = 4-ClC<sub>6</sub>H<sub>4</sub>, 3-phenyl-1,2,4-thiadiazol-5-yl, benzoxazol-2-yl, benzothiazol-2-yl, Ph, 1-naphthyl, pyridinyl) were prepared by substitution reaction of RSH with F2C:CFCH<sub>2</sub>CH<sub>2</sub>Br. F2C:CFCH<sub>2</sub>CH<sub>2</sub>R1 (II; R1 = phthalimido, 2,4-dioxothiazoliden-3-yl) were prepared similarly. I and II possessed nematocidal activity at 2.5-50 ppm.

IT 27443-03-4P 27443-04-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and nematocide activity)

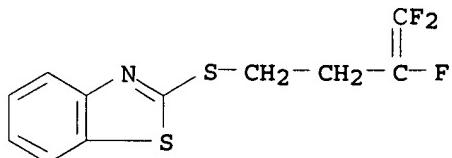
RN 27443-03-4 CAPLUS

CN Benzoxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27443-04-5 CAPLUS

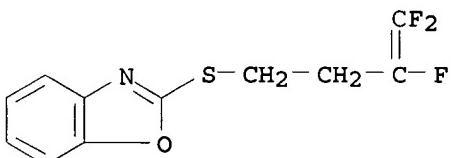
CN Benzothiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



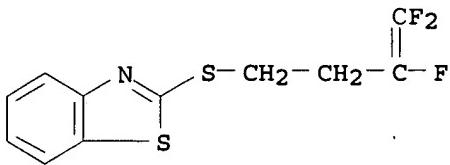
L4 ANSWER 26 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1975:531611 CAPLUS  
 DOCUMENT NUMBER: 83:131611  
 TITLE: N-(3,4,4-Trifluorobutene-3)thiazolidinedione  
 INVENTOR(S): Brokke, Mervin E.  
 PATENT ASSIGNEE(S): Stauffer Chemical Co., USA  
 SOURCE: U.S., 3 pp. Division of U.S. 3,780,050.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 5  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3891662	A	19750624	US 1973-355254	19730427
US 3780050	A	19731218	US 1971-208032	19711208
PRIORITY APPLN. INFO.:			US 1971-208032	A3 19711208
			US 1965-490664	A3 19650927
			US 1969-877538	A3 19691120

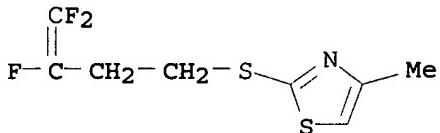
- GI For diagram(s), see printed CA Issue.  
 AB Nematocidal CF2:CFCH2CH2R [R = 2,4-dioxothiazolidin-2-yl (I), 3-phenyl-1,2,4-thiadiazol-2-ylthio (II), SC6H4Cl-p] and F2C:CFCH2CH2S2CNHCH2CH2NHCS2CH2CH2CF:CF2 were prepared from CF2:CFCH2CH2Br and RH in MeOH-NaOMe. Thus, 11.7 g 2,4-thiazolidinedione in MeOH containing NaOMe was refluxed with 18.9 g CF2:CFCH2CH2Br for 2 hr to give 7.2 g I. I had partial nematocidal activity at 1 ppm.  
 IT 27443-03-4 27443-04-5 27540-22-3  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (nematocidal activity of)  
 RN 27443-03-4 CAPLUS  
 CN Benzoxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27443-04-5 CAPLUS  
 CN Benzothiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



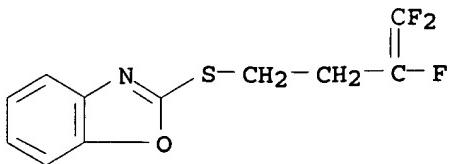
RN 27540-22-3 CAPLUS  
 CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



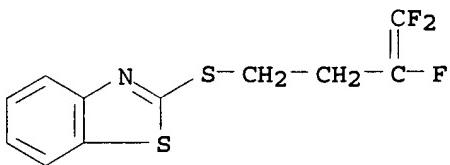
L4 ANSWER 27 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1974:82988 CAPLUS  
 DOCUMENT NUMBER: 80:82988  
 TITLE: 2-Thiobenzoxazolyl and 2-thiobenzothiazolyl trifluorobutenyl compounds  
 INVENTOR(S): Brokke, Mervin E.  
 PATENT ASSIGNEE(S): Stauffer Chemical Co.  
 SOURCE: U.S., 2 pp. Division of U. S. 3,697,536 (CA 78;43464g).  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 5  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3780050	A	19731218	US 1971-208032	19711208
US 3513172	A	19700519	US 1965-490664	19650927
US 3697536	A	19721010	US 1969-877538	19691120
US 354979	A1	19750128	US 1973-354979	19730427
US 3914251	A	19751021		
US 3891662	A	19750624	US 1973-355254	19730427
PRIORITY APPLN. INFO.:			US 1965-490664	A3 19650927
			US 1969-877538	A3 19691120
			US 1971-208032	A3 19711208

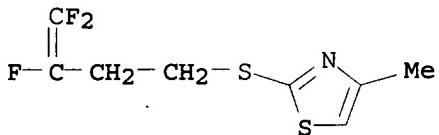
GI For diagram(s), see printed CA Issue.  
 AB Reaction of 3-phenyl-1,2,4-thiadiazole-5-thiol with CF<sub>2</sub>:CF(CH<sub>2</sub>)<sub>2</sub>Br gave I with nematocidal activity. The preparation of N-(3,4,4-trifluoro-3-butenyl)-2,4-thiazolidinedione was also described.  
 IT 27443-03-4 27443-04-5 27540-22-3  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (nematocidal activity of)  
 RN 27443-03-4 CAPLUS  
 CN Benzoxazole, 2-[(3,4,4-trifluoro-3-butyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27443-04-5 CAPLUS  
 CN Benzothiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27540-22-3 CAPLUS  
 CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



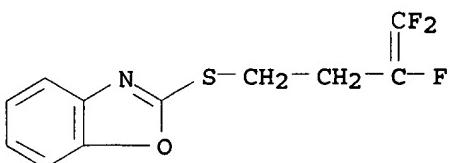
L4 ANSWER 28 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1973:58452 CAPLUS  
 DOCUMENT NUMBER: 78:58452  
 TITLE: Nematocidal 2-[3,4,4-trifluoro-3-butenylthio]-4,4,6-trimethyldihydropyrimidine  
 INVENTOR(S): Brokke, Mervin E.  
 PATENT ASSIGNEE(S): Stauffer Chemical Co.  
 SOURCE: U.S., 2 pp. Division of U.S. 3,654,293 (CA 77;19542q).  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3700668	A	19721024	US 1971-147705	19710527
PRIORITY APPLN. INFO.:			US 1971-147705	A 19710527
AB Sixteen compds. including the title compound and such heterocycles as benzoxazole, benzothiazole, and thiadiazole with 3,4,4-trifluoro-3-butene side chain were prepared and showed nematocidal activity at 1-50 ppm. Thus, 6.6 g 3-phenyl-1,2,4-thiadiazole-5-thiol was mixed with 9.5 g F2C:CFCH2CH2Br and 10.1 g Et3N in 150 ml dioxane, the mixture refluxed 2.5 hr to give 8.8 g 3-phenyl-5-(3,4,4-trifluoro-3-butene-1,2,4-thiadiazole).				
IT 27443-03-4P 27443-04-5P 27540-22-3P				

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation and nematocidal activity of)

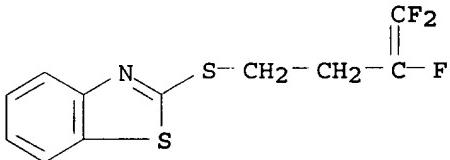
RN 27443-03-4 CAPLUS

CN Benzoxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



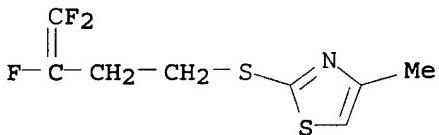
RN 27443-04-5 CAPLUS

CN Benzothiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27540-22-3 CAPLUS

CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1973:43464 CAPLUS

DOCUMENT NUMBER: 78:43464

TITLE: 2-(3,4,4-Trifluoro-3-butenylthio)-4-methylthiazole as a nematocide

INVENTOR(S): Brokke, Mervin E.

PATENT ASSIGNEE(S): Stauffer Chemical Co.

SOURCE: U.S., 3 pp. Division of U.S. 3,513,172 (CA 73;35381j).  
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 3697536	A	19721010	US 1969-877538	19691120

US 3780050	A	19731218	US 1971-208032	19711208
US 354979	A1	19750128	US 1973-354979	19730427
US 3914251	A	19751021		
PRIORITY APPLN. INFO.:			US 1965-490664	A3 19650927
			US 1969-877538	A3 19691120
			US 1971-208032	A3 19711208

GI For diagram(s), see printed CA Issue.

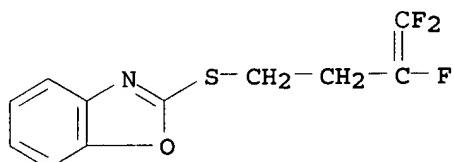
AB The title compound (I) and other heterocycles with the same trifluorobutenyl side chain, useful as nematocides at 2.5-50 ppm, were prepared by alkylation of the appropriate heterocyclic thiol with CF<sub>2</sub>:CFCH<sub>2</sub>CH<sub>2</sub>Br in the presence of such organic base as Et<sub>3</sub>N. Sixteen heterocyclic compds. including benzoxazole, benzothiazole, pyrimidine, thiadiazole, etc. were prepared and tested.

IT 27443-03-4P 27443-04-5P 27540-22-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

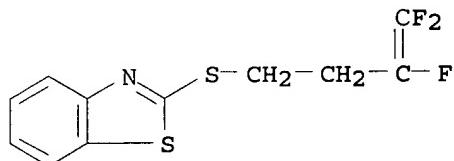
RN 27443-03-4 CAPLUS

CN Benzoxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



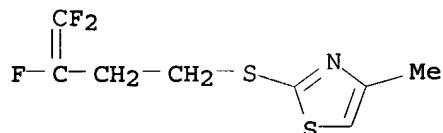
RN 27443-04-5 CAPLUS

CN Benzothiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27540-22-3 CAPLUS

CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

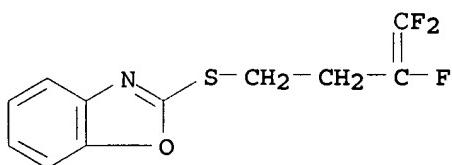
ACCESSION NUMBER: 1973:29777 CAPLUS

DOCUMENT NUMBER: 78:29777

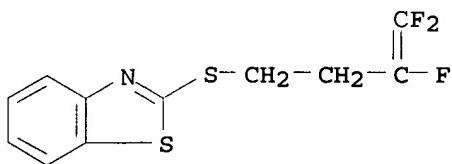
TITLE: Bis (3,4,4-trifluoro-3-butenyl) sulfide as a nematocide

INVENTOR(S) : Brokke, Mervin E.  
 PATENT ASSIGNEE(S) : Stauffer Chemical Co.  
 SOURCE: U.S., 3 pp. Division of U.S. 3,513,172 (CA 73;35381j).  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

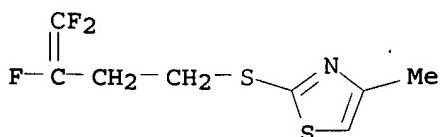
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 3692912	A	19720919	US 1969-877540	19691120
PRIORITY APPLN. INFO.:				US 1969-877540	A 19691120
AB	CF <sub>2</sub> :CFCH <sub>2</sub> CH <sub>2</sub> R (I, R = SC <sub>6</sub> H <sub>4</sub> Cl-p (II), S <sub>2</sub> CN(CH <sub>2</sub> ) <sub>2</sub> NCS <sub>2</sub> (CH <sub>2</sub> ) <sub>2</sub> CF:CF <sub>2</sub> , [(3-phenyl-1,2,4-thiadiazol-5-yl)thio], 2,4-dioxo-3-thiazolidinyl), useful as nematocides, were prepared. Thus, II was prepared by the reaction of p-ClC <sub>6</sub> H <sub>4</sub> SH with CF <sub>2</sub> :CFCH <sub>2</sub> CH <sub>2</sub> Br. At 2.5 ppm bis(3,4,4-trifluoro-3-butenyl)sulfide allowed no nematode development. Fifteen addnl. compds. were nematocides at 1-50 ppm.				
IT	27443-03-4 27443-04-5 27540-22-3				
	RL: RCT (Reactant); RACT (Reactant or reagent) (nematocide)				
RN	27443-03-4 CAPLUS				
CN	Benzoxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)				



RN 27443-04-5 CAPLUS  
 CN Benzothiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)

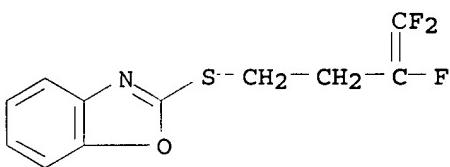


RN 27540-22-3 CAPLUS  
 CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)

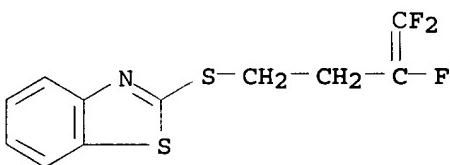


L4 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1972:488467 CAPLUS  
 DOCUMENT NUMBER: 77:88467  
 TITLE: Nematocidal trifluorobutenyl sulfides  
 INVENTOR(S): Brokke, Mervin E.  
 PATENT ASSIGNEE(S): Stauffer Chemical Co.  
 SOURCE: U.S., 3 pp. Division of U.S. 3,513,172 (CA 73;35381j).  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

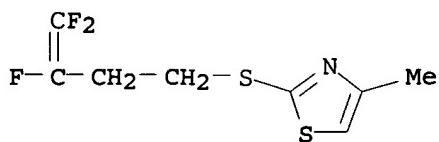
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
US 3666818	A	19720530	US 1969-877541	19691120
PRIORITY APPLN. INFO.:			US 1969-877541	A 19691120
AB Trifluorobutenyl derivs. CF <sub>2</sub> :CFCH <sub>2</sub> CH <sub>2</sub> R (I, R = p-ClC <sub>6</sub> H <sub>4</sub> S, CF <sub>2</sub> :CFCH <sub>2</sub> CH <sub>2</sub> S, CF <sub>2</sub> :CFCH <sub>2</sub> CH <sub>2</sub> S <sub>2</sub> , 4,4,6-trimethyldihydro-2-pyrimidinylthio, 2-, 4-pyridylthio, 2-benzoxazolylthio, 2-benzothiazolylthio, 4-methyl-2-thiazolylthio, CF <sub>2</sub> :CFCH <sub>2</sub> CH <sub>2</sub> S <sub>2</sub> CNHCH <sub>2</sub> CH <sub>2</sub> NHCS <sub>2</sub> , PhS, N-phthalimido, 3-phenyl-1,2,4-thiadiazol-5-ylthio, Ph-CH <sub>2</sub> S, naphthylthio, 2,4-dioxo-3-thiazolidinyl) were prepared by treating the amine or thiol with CF <sub>2</sub> :CFCH <sub>2</sub> CH <sub>2</sub> Br (II) and base. Thus 14.4 g p-ClC <sub>6</sub> H <sub>4</sub> SH and 25 g 25% MeONa-MeOH were treated with 18.9 g II to give I (R = p-ClC <sub>6</sub> H <sub>4</sub> S). I (R = CF <sub>2</sub> :CFCH <sub>2</sub> CH <sub>2</sub> S) at 2.5 ppm in soil prevented Meloidogyne infection of tomato roots.				
IT 27443-03-4 27443-04-5 27540-22-3				
RL: RCT (Reactant); RACT (Reactant or reagent) (nematode control by)				
RN 27443-03-4 CAPLUS				
CN Benzoxazole, 2-[(3,4,4-trifluoro-3-but enyl)thio]- (8CI, 9CI) (CA INDEX NAME)				



RN 27443-04-5 CAPLUS  
 CN Benzothiazole, 2-[(3,4,4-trifluoro-3-but enyl)thio]- (8CI, 9CI) (CA INDEX  
 NAME)



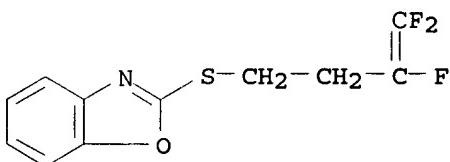
RN 27540-22-3 CAPLUS  
 CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-but enyl)thio]- (8CI, 9CI) (CA  
 INDEX NAME)



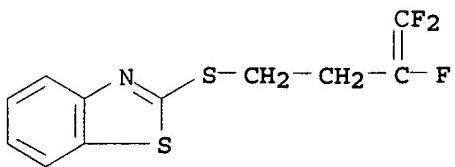
L4 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1972:419542 CAPLUS  
 DOCUMENT NUMBER: 77:19542  
 TITLE: 2- and 4-(3,4,4-Trifluoro-3-butenylthio)pyridines  
 INVENTOR(S): Brokke, Mervin E.  
 PATENT ASSIGNEE(S): Stauffer Chemical Co.  
 SOURCE: U.S., 2 pp. Division of U.S. 3,513,172 (CA 73;35381j).  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3654293	A	19720404	US 1969-877539	19691120
PRIORITY APPLN. INFO.:			US 1969-877539	A 19691120

GI For diagram(s), see printed CA Issue.  
 AB Division of U.S. 3,513,172 (CA 73: 35381j). The title compds. (I) and (II) and other 3,4,4-trifluoro-3-butenyl sulfides, useful as nematocides, were prepared from thiols and CF<sub>2</sub>-CF(CH<sub>2</sub>)<sub>2</sub>Br (III) in the presence of base. Thus, NaOMe and III were added to p-C<sub>1</sub>C<sub>6</sub>H<sub>4</sub>SH in MeOH and the mixture refluxed 1 hr to give p-C<sub>1</sub>C<sub>6</sub>H<sub>4</sub>SCH<sub>2</sub>CH<sub>2</sub>CF<sub>2</sub>. Similarly prepared were: bis(3,4,4-trifluoro-3-butenyl) ethylenbis(dithiocarbamate), 3-phenyl-5-(3,4,4-trifluoro-3-butenylthio)-1,2,4-thiadiazole, N-(3,4,4-trifluoro-3-butenyl)-2,4-thiazolidinedione, I, and II. I and II were claimed.  
 IT 27443-03-4P 27443-04-5P 27540-22-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 27443-03-4 CAPLUS  
 CN Benzoxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)

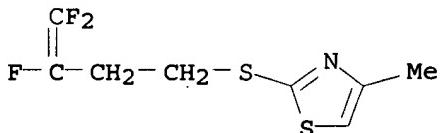


RN 27443-04-5 CAPLUS  
 CN Benzothiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27540-22-3 CAPLUS

CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1970:435381 CAPLUS

DOCUMENT NUMBER: 73:35381

TITLE: Nematocidal 3,4,4-trifluoro-3-butenylthio-heterocycles

INVENTOR(S): Brokke, Mervin E.

PATENT ASSIGNEE(S): Stauffer Chemical Co.

SOURCE: U.S., 2 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

## PATENT INFORMATION:

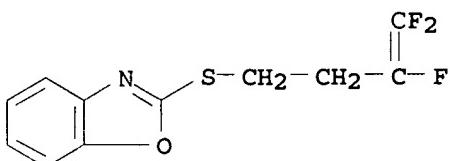
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3513172	A	19700519	US 1965-490664	19650927
US 3780050	A	19731218	US 1971-208032	19711208
US 354979	A1	19750128	US 1973-354979	19730427
US 3914251	A	19751021		
PRIORITY APPLN. INFO.:			US 1965-490664	A3 19650927
			US 1969-877538	A3 19691120
			US 1971-208032	A3 19711208

AB The subject compds., which show nematocidal activity, are prepared Thus, 25 g of 25% NaOMe and 18.9 g CF<sub>2</sub>:CFCH<sub>2</sub>CH<sub>2</sub>Br are added to 14.4 g 4-ClC<sub>6</sub>H<sub>4</sub>SH in 200 ml MeOH and the mixture refluxed 1 hr, and worked up to yield 19.3 g 4-ClC<sub>6</sub>H<sub>4</sub>SCH<sub>2</sub>CH<sub>2</sub>CF:CF<sub>2</sub> (I), n<sub>30D</sub> 1.5360. The following compds. are similarly prepared: bis-(3,4,4-trifluoro-3-butenyl) ethylenebis(dithiocarbamate) (II), n<sub>30D</sub> 1.5292; 3-phenyl-5-(3,4,4-trifluoro-3-butenylthio)-1,2,4-thiadiazole (III), n<sub>30D</sub> 1.5687. At 50 ppm I gives complete control of root knot nematodes (Meloidogyne species) in soil containing tomato plants. The following compds. are similarly prepared (n<sub>30D</sub> and ppm to control nematodes given) II, 1.5292, 10; III, 1.5687, 2.5; N-(3,4,4-trifluoro-3-but enyl)-2,4-thiazolidenedione, 1.4678, -; (CF<sub>2</sub>:CFCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>S, 1.4687, 2.5; 2-(3,4,4-trifluoro-3-but enylthio)trimethyldihydropyrimidine, 1.4949, 25; 2-(3,4,4-trifluoro-3-but enylthio)benzoxazole 1.5385, 2.5; 2-(3,4,4-trifluoro-3-but enylthio)benzothiazole, 1.5863, 2.5; 2-(3,4,4-trifluoro-3-but enylthio)-4-methylthiazole 1.5358; -; CF<sub>2</sub>:CFCH<sub>2</sub>CH<sub>2</sub>SPh, 1.5442, 50;

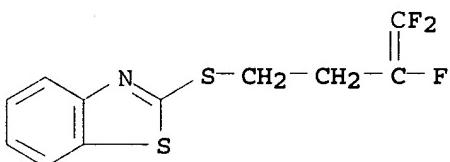
CF<sub>2</sub>:CFCH<sub>2</sub>CH<sub>2</sub>SCH<sub>2</sub>Ph, 1.5120, 25; 3,4,4-trifluoro-3-but enyl 1-naphthyl sulfide, 1.5805, 50; 2-QCH<sub>2</sub>CH<sub>2</sub>CF:CF<sub>2</sub> (Q = pyridyl), 1.5258, 25; and 4-QCH<sub>2</sub>CH<sub>2</sub>CF:CF<sub>2</sub> 1.5471, -.

IT 27443-03-4P 27443-04-5P 27540-22-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

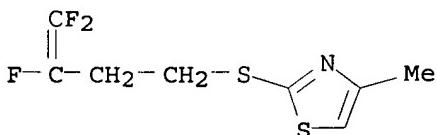
RN 27443-03-4 CAPLUS  
 CN Benzoxazole, 2-[(3,4,4-trifluoro-3-but enyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27443-04-5 CAPLUS  
 CN Benzothiazole, 2-[(3,4,4-trifluoro-3-but enyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 27540-22-3 CAPLUS  
 CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-but enyl)thio]- (8CI, 9CI) (CA INDEX NAME)



=> log h  
 COST IN U.S. DOLLARS

	SINCE FILE	TOTAL
	ENTRY	SESSION

FULL ESTIMATED COST

173.91 341.06

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

	SINCE FILE	TOTAL
	ENTRY	SESSION

CA SUBSCRIBER PRICE

-24.75 -24.75

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 06:34:06 ON 06 SEP 2006

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAJRK1626

PASSWORD:

\* \* \* \* \* RECONNECTED TO STN INTERNATIONAL \* \* \* \* \*  
SESSION RESUMED IN FILE 'CAPLUS' AT 07:12:56 ON 06 SEP 2006  
FILE 'CAPLUS' ENTERED AT 07:12:56 ON 06 SEP 2006  
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	173.91	341.06
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-24.75	-24.75

=> peroxomonosulfate or peroxomonosulfuric

244 PEROXOMONOSULFATE  
60 PEROXOMONOSULFURIC

L6 292 PEROXOMONOSULFATE OR PEROXOMONOSULFURIC

=> 16 and oxid?

2927953 OXID?

L7 186 L6 AND OXID?

=> 17 and sulfide

318773 SULFIDE

L8 13 L7 AND SULFIDE

=> d ibib abs 1-13

L8 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:371143 CAPLUS  
DOCUMENT NUMBER: 140:377339  
TITLE: Device and method for pressure-driven plug transport  
and reaction  
INVENTOR(S): Ismagilov, Rustem F.  
PATENT ASSIGNEE(S): The University of Chicago, USA  
SOURCE: PCT Int. Appl., 161 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004038363	A2	20040506	WO 2003-US14794	20030509
WO 2004038363	A3	20041209		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 AU 2003290508 A1 20040513 AU 2003-290508 20030509  
 EP 1508044 A2 20050223 EP 2003-783044 20030509  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 JP 2006504512 T2 20060209 JP 2004-546666 20030509  
 PRIORITY APPLN. INFO.: US 2002-379927P P 20020509  
                           US 2002-394544P P 20020708  
                           WO 2003-US14794 W 20030509

AB The present invention provides microfabricated substrates and methods of conducting reactions within these substrates. The reactions occur in plugs transported in the flow of a carrier-fluid. One or more inlet flows may be introduced to form a plug. In some embodiments of the invention, the inlet flows may be relatively unmixed or selectively mixed prior to injection into the carrier fluid. The microchannels are constructed with twisting, turning, and bending, with mixing, and any subsequent chemical reactions, occurring within the plugs due to the changing of the typical laminar velocity profiles as the wall geometry changes directions. The formation of the plugs preferentially occurs at low values of the capillary number  $C_n$ , where  $C_n = U \mu / \gamma$ , where  $U$ =flow velocity,  $\mu$ =carrier fluid viscosity, and  $\gamma$ = interfacial tension.

L8 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:729190 CAPLUS  
 DOCUMENT NUMBER: 140:189818  
 TITLE: CdS Nanoparticle Photocatalysis of the Chain Oxidation of Sulfite Ions by Molecular Oxygen  
 AUTHOR(S): Raevskaya, A. E.; Stroyuk, A. L.; Kuchmii, S. Ya.  
 CORPORATE SOURCE: L. V. Pisarzhevskii Institute of Physical Chemistry, National Academy of Sciences of Ukraine, Kiev, 03028, Ukraine  
 SOURCE: Theoretical and Experimental Chemistry (Translation of Teoreticheskaya i Eksperimental'naya Khimiya) (2003), 39(4), 235-241  
 CODEN: TEXCAK; ISSN: 0040-5760  
 PUBLISHER: Kluwer Academic/Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB High photocatalytic activity was found for colloidal cadmium sulfide nanoparticles in the radical chain oxidation of sulfite ions by mol. oxygen in aqueous solution. The kinetics of this reaction was studied and a mechanism was proposed, which is in satisfactory accord with the exptl. data.  
 REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:72059 CAPLUS  
 DOCUMENT NUMBER: 138:254746  
 TITLE: Smart Aqueous Reaction Medium  
 AUTHOR(S): Davies, D. Martin; Stringer, Estelle L.  
 CORPORATE SOURCE: Division of Chemical Sciences, School of Applied Sciences, Northumbria University, Newcastle upon Tyne, NE1 8ST, UK  
 SOURCE: Langmuir (2003), 19(6), 1927-1928  
 CODEN: LANGD5; ISSN: 0743-7463  
 PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Smart materials show a nonlinear response to a stimulus. In aqueous solution, the reactions between Me p-tolyl sulfide and peroxomonosulfate or m-chloroperbenzoic acid show the expected linear dependence of the logarithm of the measured rate constant on the reciprocal temperature. This constitutes Arrhenius behavior. In the presence of 5 or 15 g L<sup>-1</sup> of the thermoresponsive poloxamer, P104, H(OCH<sub>2</sub>CH<sub>2</sub>)<sub>27</sub>(OCH(CH<sub>3</sub>)CH<sub>2</sub>)<sub>61</sub>(OCH<sub>2</sub>CH<sub>2</sub>)<sub>27</sub>OH, which forms micelles as the temperature is increased, anti-Arrhenius behavior or hyper-Arrhenius behavior is observed. Anti-Arrhenius behavior occurs when the organic sulfide partitions into the thermally induced poloxamer micelles while the peroxomonosulfate anion remains in the bulk aqueous phase, causing a decrease in rate. Hyper-Arrhenius behavior occurs when both the organic sulfide and the m-chloroperbenzoic acid partition into the thermally induced micelles, causing a much greater increase in rate with temperature than in the absence of poloxamer. These two different types of smart behavior of aqueous P104 are discussed.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1996:718974 CAPLUS  
DOCUMENT NUMBER: 126:75152  
TITLE: Effect of  $\alpha$ -cyclodextrin on the oxidation of aryl alkyl sulfides by peracids  
AUTHOR(S): Davies, M. Martin; Deary, Michael E.  
CORPORATE SOURCE: Dep. of Chem. & Life Sciences, Univ. of Northumbria at Newcastle, Newcastle Upon Tyne, NE1 8ST, UK  
SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1996), (11), 2423-2430  
CODEN: JCPKBH; ISSN: 0300-9580  
PUBLISHER: Royal Society of Chemistry  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The effect of  $\alpha$ -cyclodextrin on the kinetics of aryl alkyl sulfide oxidation by peracids was investigated by studying the following reaction series: (a) a range of aryl alkyl sulfides with three different perbenzoic acids and (b) a range of alkyl peracids and perbenzoic acids with five different aryl alkyl studies. For peracids which bind strongly to  $\alpha$ -cyclodextrin, the observed second-order rate constant increases to a maximum with increasing cyclodextrin concentration and thereafter non-productive binding of the sulfide causes a decline in rate. Weakly binding peracids, such as peracetic acid show only a decline in rate constant with increasing cyclodextrin concentration. Linear free energy relationships reveal that transition state stabilization by one mol. of cyclodextrin shows a far greater dependence on the stability of the peracid-cyclodextrin complex than on the stability of the sulfide-cyclodextrin complex, indicating that the principle pathway for the cyclodextrin mediated reaction is that between the peracid-cyclodextrin complex and uncomplexed sulfide. Several possible mechanisms of catalysis are discussed. Transition state stabilization by two mols. of  $\alpha$ -cyclodextrin was observed for those peracids which demonstrate significant 2:1 complex formation.

L8 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1993:241936 CAPLUS

DOCUMENT NUMBER: 118:241936  
 TITLE: Redox chemistry of hydrogen sulfide oxidation in the British Gas Stretford Process. Part I. Thermodynamics of sulfur-water systems at 298 K  
 AUTHOR(S): Kelsall, G. H.; Thompson, I.  
 CORPORATE SOURCE: Dep. Miner. Resour. Eng., Imp. Coll., London, SW7 2BP, UK  
 SOURCE: Journal of Applied Electrochemistry (1993), 23(4), 279-86  
 CODEN: JAELBJ; ISSN: 0021-891X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The thermodn. of aqueous sulfur-water systems is summarized in the form of potential-pH diagrams, calculated from recently reported critically assessed standard Gibbs energies of formation of the species considered. There is convincing evidence from the literature that a value of  $pK_a(HS^-) = 17-19$  is appropriate, whereas a value of 13 is widely accepted; hence, the higher value of 19, corresponding to  $\Delta G^\circ f(S_2^-) = 120.5$  kJ/mol, was used in these calcns., rather than  $\Delta D^\circ f(S_2^-) = 86.31$  kJ/mol quoted in the main data source. Under ambient conditions, only -2 (sulfide), 0 (elemental sulfur) and +6 (sulfate) oxidation states are thermodynamically stable in water, which is predicted to be oxidized by peroxodisulfate ( $H_2S_2O_8/SO_8^{2-}$ ) and peroxomonosulfate ( $HSO_5^-/SO_5^{2-}$ ). When sulfate is excluded from the calcns. to allow for the large energy of activation/slow kinetics of its formation from sulfide, then other sulfoxy species appear on the diagram for what is then a metastable system. Similarly, if all sulfoxy species (i.e. any species with oxidation state >0) are excluded, then polysulfide ions ( $Sn_2^-, 2 \leq n \leq 5$ ) have areas of predominance at high pH, each with a narrow potential window of predominance. This information is complemented with  $Sn_2^-/HS^-$  activity-potential diagrams at pH 9 and 14. Some species have no area of stability even on the metastable diagrams. Potential-pH diagrams are also presented for the sulfite-dithionite system (excluding elemental sulfur), and that involving peroxomonosulfate ( $HSO_5^-/SO_5^{2-}$ ) in place of peroxodisulfate ( $H_2S_2O_8/SO_8^{2-}$ ).

L8 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1993:159658 CAPLUS  
 DOCUMENT NUMBER: 118:159658  
 TITLE: Manufacture of cobalt-substituted hexagonal barium ferrite powders, its powders, and its use as magnetic recording medium  
 INVENTOR(S): Mitani, Kozo; Yamamoto, Akihisa  
 PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04280819	A2	19921006	JP 1991-69240	19910308
PRIORITY APPLN. INFO.:			JP 1991-69240	19910308

AB The ferrite powders with controlled coercive force are manufactured by applying a S-containing inorg. compound on the ferrite powders and heating at 200-800°. The powders are also claimed. The medium consists of

the powders.

L8 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1993:131397 CAPLUS  
DOCUMENT NUMBER: 118:131397  
TITLE: Fixation of elemental mercury present in spent  
molecular sieve desiccant for disposal  
INVENTOR(S): Audeh, Costandi A.  
PATENT ASSIGNEE(S): Mobil Oil Corp., USA  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5173286	A	19921222	US 1991-732690	19910719
PRIORITY APPLN. INFO.: US 1991-732690 19910719				
AB Solid desiccant containing Hg is isolated and contacted as an aqueous mixture with an alkaline metal salt selected from Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , Na <sub>2</sub> Sx, and KHSO <sub>5</sub> to fix the Hg as a water-insol. compound. Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , and Na <sub>2</sub> Sx are used in the presence of HCl to liberate S to form HgS.				

L8 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1992:58695 CAPLUS  
DOCUMENT NUMBER: 116:58695  
TITLE: Enantioselective oxidation of sulfides to  
sulfoxides in the presence of bovine serum albumin  
AUTHOR(S): Colonna, Stefano; Gaggero, Nicoletta; Leone, Mario;  
Pasta, Piero  
CORPORATE SOURCE: Dip. Chim. Org. Ind., Univ. Milan, Milan, I-20133,  
Italy  
SOURCE: Tetrahedron (1991), 47(39), 8385-98  
CODEN: TETRAB; ISSN: 0040-4020  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 116:58695  
AB In situ-generated dioxiranes oxidize a series of prochiral  
sulfides to the corresponding sulfoxides with enantiomeric excess (e.e.)  
≤89%, when bovine serum albumin (BSA) is used as chiral auxiliary.  
The degree of enantioselectivity, as well as yield and reaction times,  
depend upon the nature of the dioxirane. These are compared with  
enantioselectivities attainable for the same transformations by using  
peroxomonosulfate alone, i.e., in the absence of ketone. In the  
oxidation of prochiral keto sulfides (wherein the carbonyl  
functionality serves as precursor of dioxirane) with  
peroxomonosulfate, optically active keto sulfoxides are isolated  
in satisfactory chemical and optical yield (e.e. ≤84%).

L8 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1990:178000 CAPLUS  
DOCUMENT NUMBER: 112:178000  
TITLE: A simple preparation of dialkylsulfinyl and  
dialkylsulfonyl sulfides  
AUTHOR(S): Anklam, Elke  
CORPORATE SOURCE: Bereich Strahlenchem., Hahn-Meitner Inst. Berlin  
G.m.b.H., Berlin, D-1000/39, Fed. Rep. Ger.

SOURCE: Synthetic Communications (1989), 19(9-10), 1583-91  
 CODEN: SYNCV; ISSN: 0039-7911

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:178000

AB Oxidation of  $\text{Cl}(\text{CH}_2)\text{nSR}'$  ( $n = 3, 4, 6$ ;  $\text{R}' = \text{Me, Et, Me}_3\text{C}$ ) with sodium periodate leads to the corresponding sulfoxids, which are converted with potassium peroxomonosulfate to the corresponding sulfones. Reactions of the sulfoxides and sulfones with alkanethiol ( $\text{MeSH, EtSH, Me}_3\text{CSH}$ ) in the presence of  $\text{NaOMe}$  leads to dialkylsulfinyl sulfides and alkylsulfonyl sulfides.

L8 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:35124 CAPLUS

DOCUMENT NUMBER: 112:35124

TITLE: On the mechanism of the Baeyer-Villiger oxidation of ketones by bis(trimethylsilyl) peroxomonosulfate. Intermediacy of dioxiranes

AUTHOR(S): Camporeale, Michele; Fiorani, Tiziana; Troisi, Luigino; Adam, Waldemar; Curci, Ruggero; Edwards, John O.

CORPORATE SOURCE: Dep. Chem., Univ. Bari, Bari, 70126, Italy

SOURCE: Journal of Organic Chemistry (1990), 55(1), 93-8

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:35124

AB The Baeyer-Villiger oxidation of cyclohexanone and acetophenone by bis(trimethylsilyl) peroxomonosulfate (I) has been reinvestigated using  $^{180}$ -labeling techniques. Starting with  $\text{Me}_3\text{Si}^{18}\text{O}^{18}\text{SO}_3\text{SiMe}_3$ , mass spectrometric analyses allowed determination of the amount

of label appearing in the carbonyl and the OR moiety of the ester (or of the lactone). Cyclohexanone promotes the decomposition of I to yield oxygen gas, which was analyzed for its  $^{180}$  content. Cyclohexanone, 4-heptanone, and acetone enhance significantly the rate of oxidation of 1-methylcyclohexene and trans- $\beta$ -methylstyrene by I, yielding 2-methylcyclohexanone and 1-phenylpropanone from the isomerization of the initially formed epoxides. The  $^{180}$ -tracer results point to a mechanism involving the intermediacy of dioxiranes as the prevailing pathway.

L8 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:79074 CAPLUS

DOCUMENT NUMBER: 110:79074

TITLE: Process for removing hydrogen sulfide and mercury from gases, particularly natural gas

INVENTOR(S): Audeh, Costandi A.

PATENT ASSIGNEE(S): Mobil Oil Corp., USA

SOURCE: U.S., 4 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4786483	A	19881122	US 1987-100869	19870925
PRIORITY APPLN. INFO.:			US 1987-100869	19870925
AB Hg and H <sub>2</sub> S are removed from gases, especially natural gas, by using a sorbent				

material which has been impregnated with an alkali metal peroxomonosulfate salt (I), e.g., K peroxomonosulfate capable of converting Hg to the oxide form and simultaneously H<sub>2</sub>S to elemental S. Sorbent materials include silica, alumina, silica-alumina, mol. sieves, and mixts. of ≥2 of these. In a variation the gas can be contacted directly with an aqueous solution of I.

L8 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1987:635825 CAPLUS  
 DOCUMENT NUMBER: 107:235825  
 TITLE: Mechanism of the oxidation of alkyl aryl and diphenyl sulfoxides by peroxomonosulfate  
 AUTHOR(S): Suthakaran, R.; Subramaniam, P.; Srinivasan, C.  
 CORPORATE SOURCE: Sch. Chem., Madurai Kamaraj Univ., Madurai, 625 021, India  
 SOURCE: Proceedings - Indian Academy of Sciences, Chemical Sciences (1986), 97(5-6), 555-63  
 CODEN: PIAADM; ISSN: 0253-4134  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB PhSOMe and Ph<sub>2</sub>SO oxidation with HO<sub>3</sub>SOO<sup>-</sup> in aqueous AcOH is 1st order in each reactant. Electron-releasing ring substituents accelerate the oxidation and electron-withdrawing ones retard it. A fair correlation between log k<sub>i</sub> and Hammett substituent consts. is observed in the 2 series. A mechanism involving rate-determining nucleophilic attack of the sulfoxide S atom at the outer terminal peroxy O atom of HS<sub>5</sub><sup>-</sup> is proposed.

L8 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1982:110093 CAPLUS  
 DOCUMENT NUMBER: 96:110093  
 TITLE: Extrinsic dental stain caused by stannous fluoride  
 AUTHOR(S): Ellingsen, Jan Eirik; Eriksen, Harald M.; Rolla, Gunnar  
 CORPORATE SOURCE: Dent. Fac., Univ. Oslo, Oslo, Norway  
 SOURCE: Scandinavian Journal of Dental Research (1982), 90(1), 9-13  
 CODEN: SJDRAN; ISSN: 0029-845X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Expts. in a standardized rabbit model indicate that the yellow-golden stain formed on tooth surfaces during the use of SnF<sub>2</sub> may consist of stannic sulfide. The nature of the stain, the presence of S in the sample and the effect of an oxidizing agent (peroxomonosulfate) on the stain support this view. Thus, the low pH of SnF<sub>2</sub> causes denaturation of pellicle protein with exposure of sulphhydryl groups, which later form stannic sulfides through reactions with Sn<sup>2+</sup> present in the preps.

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NEWS 8 MAY 30 The F-Term thesaurus is now available in CA/CAplus  
NEWS 9 JUN 02 The first reclassification of IPC codes now complete in  
INPADOC  
NEWS 10 JUN 26 TULSA/TULSA2 reloaded and enhanced with new search and  
and display fields  
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NEWS 12 JUL 11 CHEMSAFE reloaded and enhanced  
NEWS 13 JUL 14 FSTA enhanced with Japanese patents  
NEWS 14 JUL 19 Coverage of Research Disclosure reinstated in DWPI  
NEWS 15 AUG 09 INSPEC enhanced with 1898-1968 archive  
NEWS 16 AUG 28 ADISCTI Reloaded and Enhanced  
NEWS 17 AUG 30 CA(SM)/CAplus(SM) Austrian patent law changes  
  
NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT  
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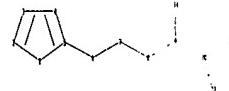
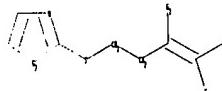
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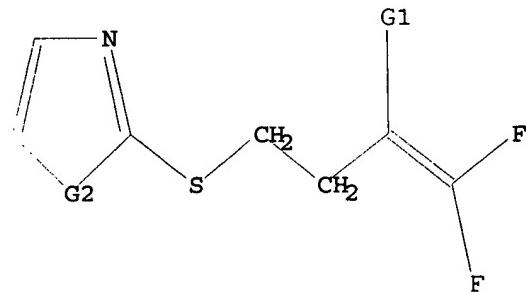
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G2:O,S,N

Match level :  
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS  
10:CLASS 11:CLASS 12:CLASS 14:CLASS

L1 STRUCTURE UPLOADED

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L1 STR



G1 H,F  
G2 O,S,N

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PROJECTED ANSWERS: 173 TO 747

L2 23 SEA SSS SAM L1

=> 11 full  
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L3 350 SEA SSS FUL L1

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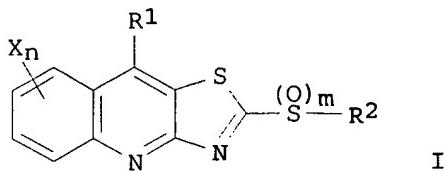
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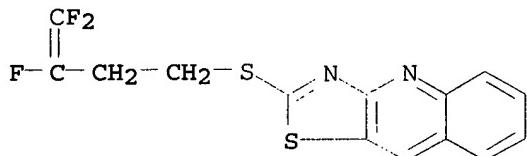
L4 ANSWER 1 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2005:1310514 CAPLUS  
DOCUMENT NUMBER: 144:36333  
TITLE: Preparation of thiazoloquinolines and their use as agrochemical fungicides  
INVENTOR(S): Ono, Toshiharu; Kutsuma, Seiichi; Tahara, Tomomi  
PATENT ASSIGNEE(S): Hokko Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005343857	A2	20051215	JP 2004-167890	20040607
PRIORITY APPLN. INFO.:			JP 2004-167890	20040607
OTHER SOURCE(S): GI	MARPAT 144:36333			



- AB Title compds. I [R1 = H, lower alkyl; R2 = lower (halo)alkyl, (halo)alkenyl, alkynyl, cyanoalkyl; X = lower (halo)alkyl, halo; m = 0-2; n = 0-4; when R2 = Me, then m = 1, 2] are prepared. Thus, refluxing 2-mercaptopthiazolo[4,5-b]quinoline with ClCH<sub>2</sub>CN and K<sub>2</sub>CO<sub>3</sub> in DMF gave 75% 2-(cyanomethylthio)thiazolo[4,5-b]quinoline, which at 100 ppm showed 60-80% inhibition against Puccinia recondita without damaging wheat.
- IT 870976-39-9P  
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of thiazoloquinolines as agrochem. fungicides)
- RN 870976-39-9 CAPLUS
- CN Thiazolo[4,5-b]quinoline, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 2 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:964974 CAPLUS  
 DOCUMENT NUMBER: 141:390414  
 TITLE: Synergistic nematocidal, insecticidal and acaricidal compositions based on trifluorobutynyl derivatives  
 INVENTOR(S): Kraus, Anton; Ishikawa, Koichi  
 PATENT ASSIGNEE(S): Bayer Cropscience Aktiengesellschaft, Germany;  
 Andersch, Wolfram  
 SOURCE: PCT Int. Appl., 47 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German

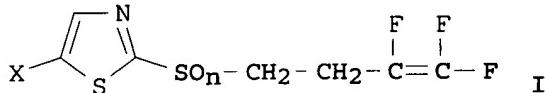
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WO 2004095930	A1	20041111	WO 2004-EP4167	20040420
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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10319590	A1	20041118	DE 2003-10319590	20030502
AU 2004233566	A1	20041111	AU 2004-233566	20040420
CA 2524060	AA	20041111	CA 2004-2524060	20040420
EP 1622452	A1	20060208	EP 2004-728332	20040420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004010038	A	20060425	BR 2004-10038	20040420
CN 1812714	A	20060802	CN 2004-80018510	20040420
PRIORITY APPLN. INFO.:			DE 2003-10319590	A 20030502
			WO 2004-EP4167	W 20040420

OTHER SOURCE(S): MARPAT 141:390414

GI



AB The title compns. comprise a trifluorobutylene derivative I (X = halo; n = 0, 1 or 2) and a known insecticide.

IT 786675-31-8 786675-32-9 786675-33-0

786675-34-1 786675-35-2 786675-36-3

786675-37-4 786675-38-5

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(synergistic nematocidal, insecticidal and acaricidal composition)

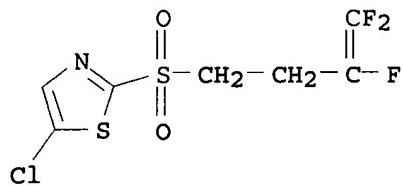
RN 786675-31-8 CAPLUS

CN Cyclopropanecarboxylic acid, 3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propenyl]-2,2-dimethyl-, (2,3,5,6-tetrafluoro-4-methylphenyl)methyl ester,  
(1R,3R)-rel-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

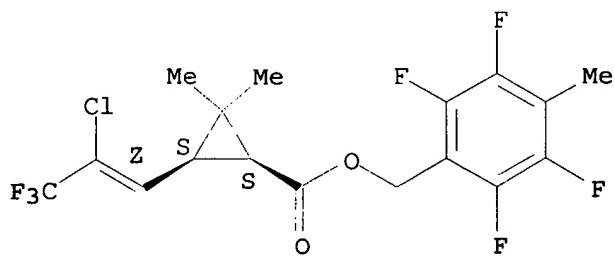
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 79538-32-2  
CMF C17 H14 Cl F7 O2

Relative stereochemistry.  
Double bond geometry as shown.

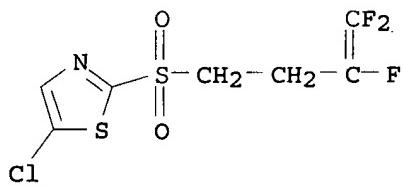


RN 786675-32-9 CAPLUS

CN Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime, mixt.  
with 5-chloro-2-[(3,4,4-trifluoro-3-butene-1-sulfonyl)thiazole (9CI) (CA  
INDEX NAME)

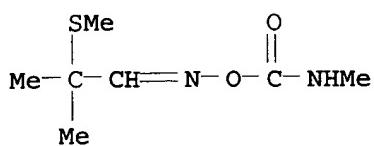
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CRN 318290-98-1  
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CM 2

CRN 116-06-3  
CMF C7 H14 N2 O2 S

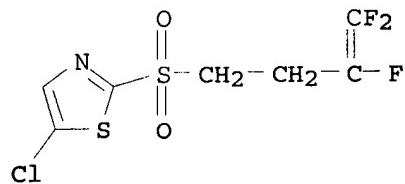


RN 786675-33-0 CAPLUS  
CN Guanidine, N-[ (2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro-, [C(E)]-,  
mixt. with 5-chloro-2-[ (3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI)  
(CA INDEX NAME)

CM 1

CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2

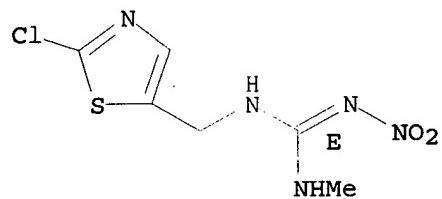


CM 2

CRN 210880-92-5

CMF C6 H8 Cl N5 O2 S

Double bond geometry as shown.



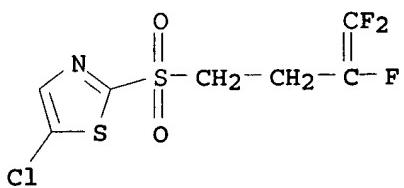
RN 786675-34-1 CAPLUS

CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

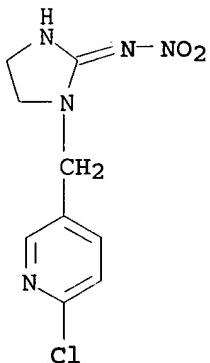
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CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 138261-41-3  
CMF C9 H10 C1 N5 O2

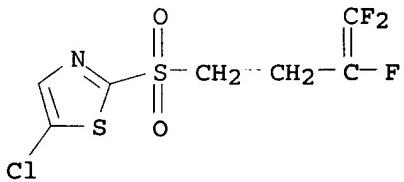


RN 786675-35-2 CAPLUS

CN Phosphorothioic acid, O-[2-(1,1-dimethylethyl)-5-pyrimidinyl] O-ethyl O-(1-methylethyl) ester, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

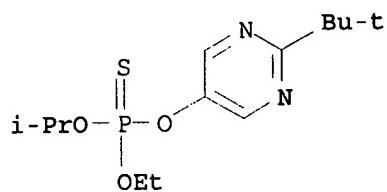
CM 1

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CMF C7 H5 C1 F3 N O2 S2



CM 2

CRN 96182-53-5  
CMF C13 H23 N2 O3 P S



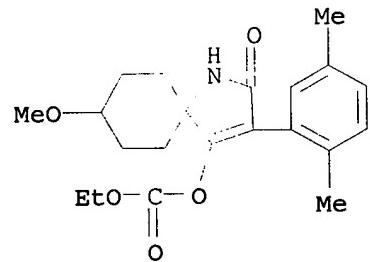
RN 786675-36-3 CAPLUS

CN Carbonic acid, 3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-azaspiro[4.5]dec-3-en-4-yl ethyl ester, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

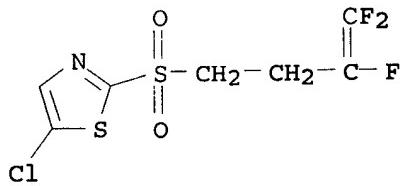
CRN 382608-10-8

CMF C21 H27 N O5



CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2



RN 786675-37-4 CAPLUS

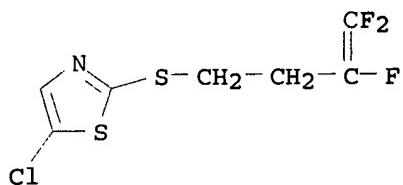
CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-, mixt. with spinosad (9CI) (CA INDEX NAME)

CM 1

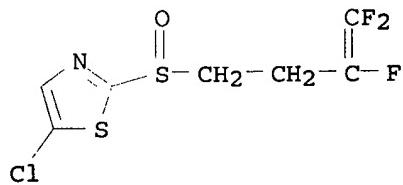
CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2

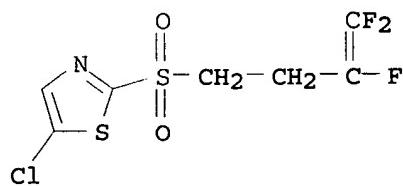
(synergistic nematocidal, insecticidal and acaricidal compns.)  
 RN 318290-96-9 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 318290-97-0 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



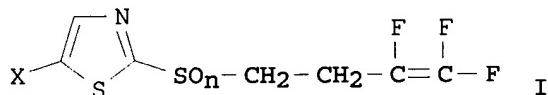
RN 318290-98-1 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:964973 CAPLUS  
 DOCUMENT NUMBER: 141:390413  
 TITLE: Synergistic nematocidal, insecticidal, and fungicidal compositions comprising trifluorobutenyl derivatives  
 INVENTOR(S): Andersch, Wolfram; Wachendorff-Neumann, Ulrike; Kraus, Anton  
 PATENT ASSIGNEE(S): Bayer Cropscience Aktiengesellschaft, Germany  
 SOURCE: PCT Int. Appl., 35 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

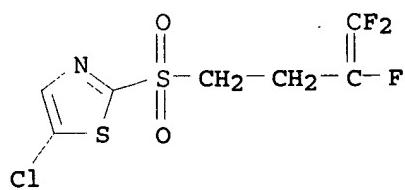
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004095929	A1	20041111	WO 2004-EP4165	20040420
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10319591	A1	20041118	DE 2003-10319591	20030502
AU 2004233565	A1	20041111	AU 2004-233565	20040420
CA 2524058	AA	20041111	CA 2004-2524058	20040420
EP 1622453	A1	20060208	EP 2004-728352	20040420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004010040	A	20060425	BR 2004-10040	20040420
CN 1812715	A	20060802	CN 2004-80018511	20040420
PRIORITY APPLN. INFO.:			DE 2003-10319591	A 20030502
			WO 2004-EP4165	W 20040420
OTHER SOURCE(S) :	MARPAT 141:390413			
GI				



- AB Disclosed are active substance combinations comprising trifluorobutenyl derivs. I (X = halo; n = 0,1 or 2) and previously known fungicides. The active substance combinations have a very good synergistic fungicidal, nematicidal, insecticidal, and/or acaricidal effect.
- IT 785816-64-0 785816-66-2 785816-68-4  
 785816-69-5 785816-71-9 785816-72-0  
 785816-74-2 785816-76-4 785816-77-5  
 785816-79-7  
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
 (synergistic nematocidal, insecticidal, and fungicidal composition)
- RN 785816-64-0 CAPLUS
- CN 3H-1,2,4-Triazole-3-thione, 2-[2-(1-chlorocyclopropyl)-3-(2-chlorophenyl)]-2-hydroxypropyl]-1,2-dihydro-, mixt. with 5-chloro-2-[ (3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

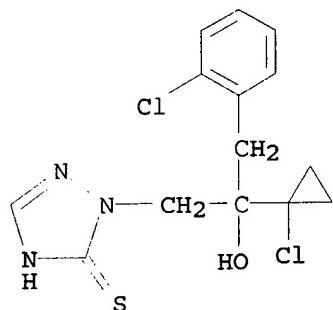
CM 1

CRN 318290-98-1  
 CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 178928-70-6  
CMF C14 H15 Cl2 N3 O S

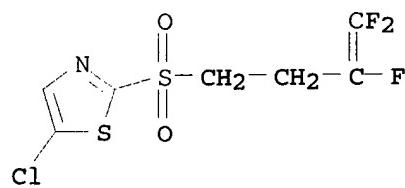


RN 785816-66-2 CAPLUS

CN 1H-Pyrrole-3-carbonitrile, 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-, mixt.  
with 5-chloro-2-[(3,4,4-trifluoro-3-butene) sulfonyl]thiazole (9CI) (CA  
INDEX NAME)

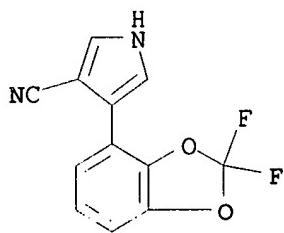
CM 1

CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 131341-86-1  
CMF C12 H6 F2 N2 O2



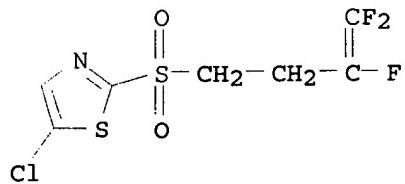
RN 785816-68-4 CAPLUS

CN Benzeneacetic acid,  $\alpha$ -(methoxyimino)-2-[[[(E)-[1-[3-(trifluoromethyl)phenyl]ethylidene]amino]oxy]methyl]-, methyl ester, ( $\alpha$ E)-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenoxy)methyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

CMF C7 H5 Cl F3 N O2 S2

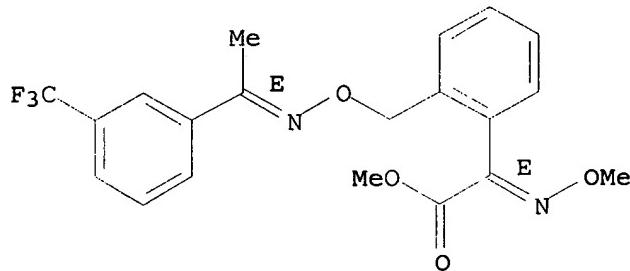


CM 2

CRN 141517-21-7

CMF C20 H19 F3 N2 O4

Double bond geometry as shown.



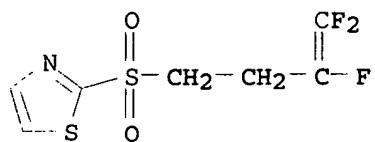
RN 785816-69-5 CAPLUS

CN Urea, N-[(4-chlorophenyl)methyl]-N-cyclopentyl-N'-phenyl-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenoxy)methyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

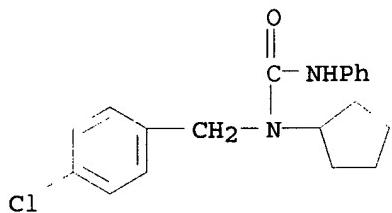
CMF C7 H5 Cl F3 N O2 S2



Cl

CM 2

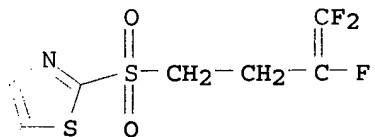
CRN 66063-05-6  
CMF C19 H21 Cl N2 O



RN 785816-71-9 CAPLUS  
CN Phosphonic acid, monoethyl ester, aluminum salt, mixt. with  
5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX  
NAME)

CM 1

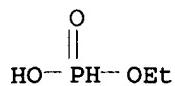
CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



Cl

CM 2

CRN 39148-24-8  
CMF C2 H7 O3 P . 1/3 Al



● 1/3 Al

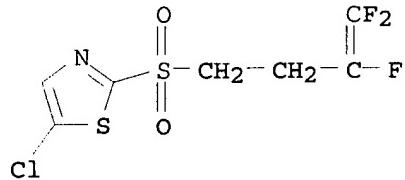
RN 785816-72-0 CAPLUS

CN Methanesulfenamide, 1,1-dichloro-N-[(dimethylamino)sulfonyl]-1-fluoro-N-(4-methylphenyl)-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

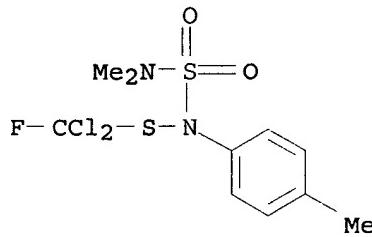
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 731-27-1

CMF C10 H13 Cl2 F N2 O2 S2



RN 785816-74-2 CAPLUS

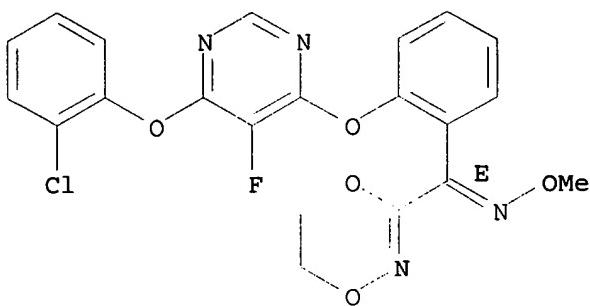
CN Methanone, [2-[[6-(2-chlorophenoxy)-5-fluoro-4-pyrimidinyl]oxy]phenyl] (5,6-dihydro-1,4,2-dioxazin-3-yl)-, O-methyloxime, (1E)-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 361377-29-9

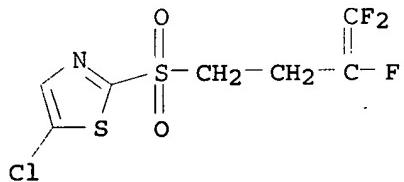
CMF C21 H16 Cl F N4 O5

Double bond geometry as shown.



CM 2

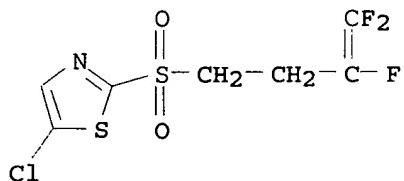
CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



RN 785816-76-4 CAPLUS  
CN 1H-1,2,4-Triazole-1-ethanol,  $\alpha$ -[2-(4-chlorophenyl)ethyl]- $\alpha$ -(1,1-dimethylethyl)-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

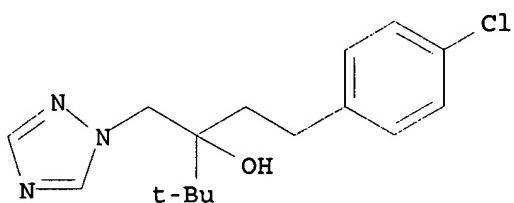
CM 1

CRN 318290-98-1  
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 107534-96-3  
CMF C16 H22 Cl N3 O



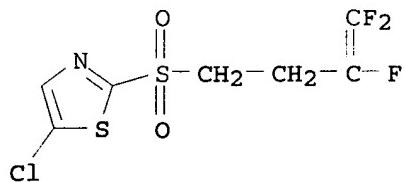
RN 785816-77-5 CAPLUS

CN 1H-Imidazole-1-carboxamide, N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

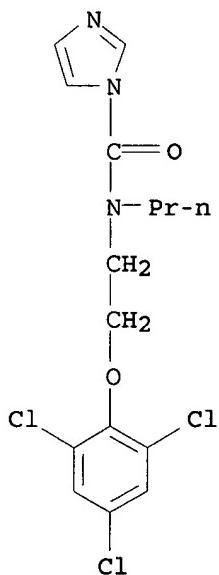
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 67747-09-5

CMF C15 H16 Cl3 N3 O2



RN 785816-79-7 CAPLUS

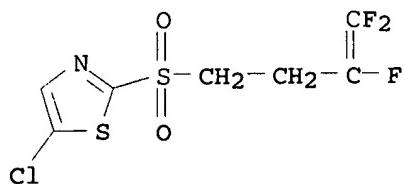
10518454.trn

CN 1-Imidazolidinecarboxamide, 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-, mixt. with 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]thiazole (9CI) (CA INDEX NAME)

CM 1

CRN 318290-98-1

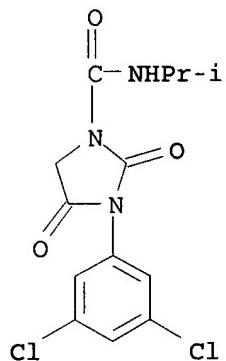
CMF C7 H5 Cl F3 N O2 S2



CM 2

CRN 36734-19-7

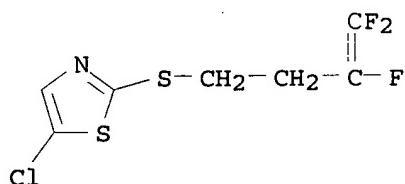
CMF C13 H13 Cl2 N3 O3



IT 318290-96-9D, mixts. with fungicides 318290-97-0D,  
mixts. with fungicides 318290-98-1D, mixts. with fungicides  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(synergistic nematocidal, insecticidal, and fungicidal compns.)

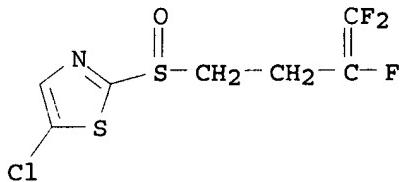
RN 318290-96-9 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



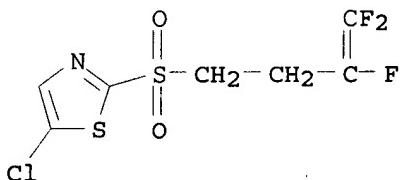
RN 318290-97-0 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 318290-98-1 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:450537 CAPLUS

DOCUMENT NUMBER: 140:419319

TITLE: Heterocyclic fluoralkenyl thioether herbicides

INVENTOR(S): Drewes, Mark Wilhelm; Andersch, Wolfram; Dauck, Hartwig; Goto, Toshio; Shirakura, Shinichi; Nakamura, Shin

PATENT ASSIGNEE(S): Bayer Cropscience Ag, Germany

SOURCE: Ger. Offen., 28 pp.

CODEN: GWXXBX

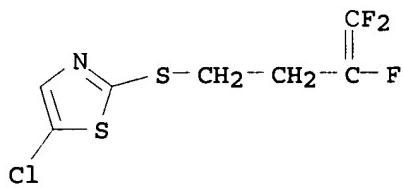
DOCUMENT TYPE: Patent

LANGUAGE: German

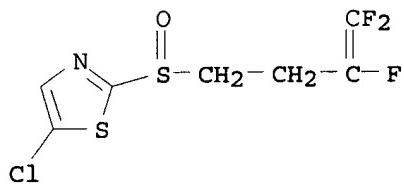
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

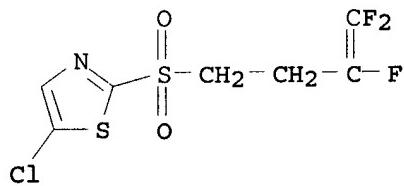
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10254876	A1	20040603	DE 2002-10254876	20021125
PRIORITY APPLN. INFO.:			DE 2002-10254876	20021125
OTHER SOURCE(S):	MARPAT 140:419319			
AB	The title compds. R <sub>1</sub> SO <sub>m</sub> CH <sub>2</sub> (CH <sub>2</sub> ) <sub>n</sub> CR:CF <sub>2</sub> [m = 0,1 or 2; n = 1-13; R = H or halo; R <sub>1</sub> (un)substituted heterocycl] are herbicides.			
IT	318290-96-9 318290-97-0 318290-98-1			
RL:	AGR (Agricultural use); BIOL (Biological study); USES (Uses) (herbicide)			
RN	318290-96-9 CAPLUS			
CN	Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butyl)thio]- (9CI) (CA INDEX NAME)			



RN 318290-97-0 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA  
 INDEX NAME)



RN 318290-98-1 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA  
 INDEX NAME)

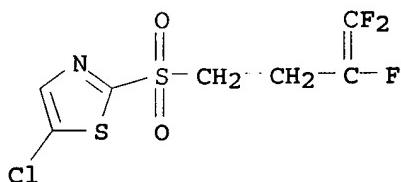


L4 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:41453 CAPLUS  
 DOCUMENT NUMBER: 140:94039  
 TITLE: Method for producing heterocyclic  
       fluoroalkenylsulfones especially 5-chloro-2-[(3,4,4-  
       trifluoro-3-butenyl)sulfonyl]-1,3-thiazole  
 INVENTOR(S): Straub, Alexander  
 PATENT ASSIGNEE(S): Bayer CropScience AG, Germany  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

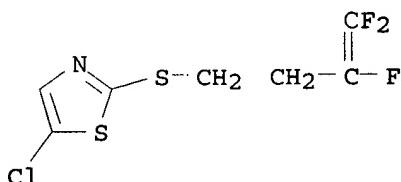
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004005268	A1	20040115	WO 2003-EP6511	20030620
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,				

	PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR,		
	TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,		
	KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,		
	FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,		
	BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
DE 10229776	A1 20040122	DE 2002-10229776	20020703
AU 2003245974	A1 20040123	AU 2003-245974	20030620
EP 1519928	A1 20050406	EP 2003-738072	20030620
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,		
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK		
CN 1665795	A 20050907	CN 2003-815722	20030620
JP 2005537249	T2 20051208	JP 2004-518547	20030620
US 2006004196	A1 20060105	US 2005-518454	20050801
PRIORITY APPLN. INFO.:		DE 2002-10229776	A 20020703

OTHER SOURCE(S): CASREACT 140:94039; MARPAT 140:94039  
 AB HetSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CR<sub>1</sub>:CF<sub>2</sub> and HetS(:O)CH<sub>2</sub>CH<sub>2</sub>CR<sub>1</sub>:CF<sub>2</sub> [Het = (substituted) 5-6 membered condensed heterocyclyl; R<sub>1</sub> = H, F], were prepared by oxidation of HetSCH<sub>2</sub>CH<sub>2</sub>CR<sub>1</sub>:CF<sub>2</sub> (Het and R<sub>1</sub> as above) with a salt of H<sub>2</sub>SO<sub>5</sub> in the presence of an auxiliary agent and diluent. Oxidation of 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfanyl]-1,3-thiazole in MeOH with Oxone in H<sub>2</sub>O gave 92,2% 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-1,3-thiazole.  
 IT 318290-98-1P  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
     (method for producing heterocyclic fluoroalkenylsulfones especially chloro[(trifluorobutenyl)sulfonyl]thiazole)  
 RN 318290-98-1 CAPLUS  
 CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



IT 318290-96-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(method for producing heterocyclic fluoroalkenylsulfones especially  
chloro[(trifluorobut enyl)sulfonyl]thiazole)  
RN 318290-96-9 CAPLUS  
CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX  
NAME)

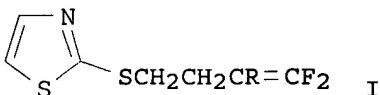


REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:570971 CAPLUS  
 DOCUMENT NUMBER: 139:133556  
 TITLE: Method for producing halogenated 2-(3-butenylthio)-1,3-thiazoles  
 INVENTOR(S): Straub, Alexander  
 PATENT ASSIGNEE(S): Bayer CropScience AG, Germany  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003059896	A1	20030724	WO 2003-EP28	20030103
W: AE, AG, AL, AM, AT, AU, AZ, CO, CR, CU, CZ, DE, DK, DM, GM, HR, HU, ID, IL, IN, IS, LS, LT, LU, LV, MA, MD, MG, PL, PT, RO, RU, SC, SD, SE, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		BA, BB, BG, BR, BY, BZ, CA, CH, CN, DZ, EC, EE, ES, FI, GB, GD, GE, GH, JP, KE, KG, KP, KR, KZ, LC, LK, LR, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,		
RW: GH, GM, KE, LS, MW, MZ, SD, RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
DE 10201238	A1	20030724	DE 2002-10201238	20020115
AU 2003212206	A1	20030730	AU 2003-212206	20030103
EP 1467980	A1	20041020	EP 2003-708046	20030103
EP 1467980	B1	20050727		
R: AT, BE, CH, DE, DK, ES, FR, IE, SI, LT, LV, FI, RO, MK,		GB, GR, IT, LI, LU, NL, SE, MC, PT, CY, AL, TR, BG, CZ, EE, HU, SK		
JP 2005519896	T2	20050707	JP 2003-560000	20030103
AT 300527	E	20050815	AT 2003-708046	20030103
ES 2246467	T3	20060216	ES 2003-3708046	20030103
US 2005124816	A1	20050609	US 2005-501115	20050126
US 7078527	B2	20060718		
US 2006183914	A1	20060817	US 2006-403514	20060413
US 2006183915	A1	20060817	US 2006-403743	20060413
PRIORITY APPLN. INFO.:			DE 2002-10201238	A 20020115
			WO 2003-EP28	W 20030103
			US 2005-501115	A3 20050126

OTHER SOURCE(S): CASREACT 139:133556; MARPAT 139:133556  
 GI



AB Title compds. (I; R = H, F), were prepared in following steps (1) preparing F2C:CRCH2CH2SCN (II; R as above) by reacting F2C:CRCH2CH2X (R as above, X = Br, Cl, mesylate, tosylate) with M+SCN- (M+ = H, NH+, tetraalkylammonium, alkaline (earth) ion) in the presence of a reaction aid and a solvent, (2) treatment of II with H2S or salts thereof in the presence of a reaction aid and a solvent to give F2C:CRCH2CH2S(:NH)SH (III; R as above), and (3) reacting III with MeCHO, ClCH2CHO, or chloroacetaldehyde dialkylacetal in a solvent to give I. Thus, NH4NCS in EtOH was stirred with 4-bromo-1,1,2-trifluoro-1-butene for 2 h at room temperature to give 93.3% 3,4,4-trifluoro-3-butenylthiocyanate. The latter and Et3N in t-BuOMe were treated with H2S followed by stirring over night at room temperature to give 88.5% 3,4,4-trifluoro-3-butenylthiocarbamate which was treated with concentrated HCl and 45% ClCH2CHO in dioxane followed by boiling for 4 h whereby ClCH2CHO was again added after 2 h to give 94.4% 2-[(3,4,4-trifluoro-3-butenyl)thio]-1,3-thiazole. I are important intermediates for producing pesticides.

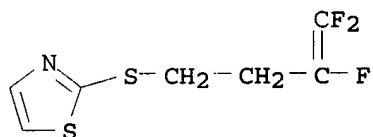
IT 109993-23-9P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(method for producing halogenated (butenylthio)thiazoles)

RN 109993-23-9 CAPLUS

CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:472309 CAPLUS

DOCUMENT NUMBER: 139:18622

TITLE: Preparation of nematocidal trifluorobut enyl imidazolyl thioether derivatives

INVENTOR(S): Watanabe, Yukiyoshi; Ishikawa, Koichi; Otsu, Yuichi; Shibuya, Katsuhiko; Abe, Takahisa

PATENT ASSIGNEE(S): Bayer CropScience AG, Germany

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

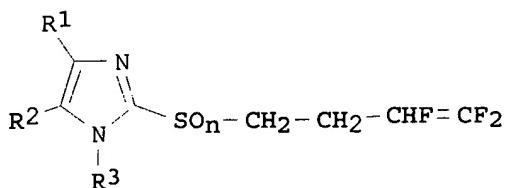
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003049541	A2	20030619	WO 2002-EP13608	20021202
WO 2003049541	A3	20040812		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,			

KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 JP 2003192675 A2 20030709 JP 2001-380152 20011213  
 CA 2469241 AA 20030619 CA 2002-2469241 20021202  
 AU 2002366542 A1 20030623 AU 2002-366542 20021202  
 EP 1465490 A2 20041013 EP 2002-804577 20021202  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK  
 BR 2002014953 A 20041130 BR 2002-14953 20021202  
 US 2005080123 A1 20050414 US 2003-498175 20021202  
 US 6930076 B2 20050816  
 JP 2005513044 T2 20050512 JP 2003-550596 20021202  
 PRIORITY APPLN. INFO.: JP 2001-380152 A 20011213  
 WO 2002-EP13608 W 20021202

OTHER SOURCE(S): MARPAT 139:18622  
 GI



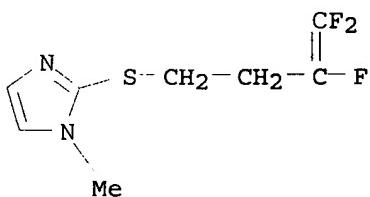
AB The trifluorobutenyl imidazolyl thioether derivs. I (R<sub>1</sub> = H or halo; R<sub>2</sub> = H, halo or alkoxy carbonyl; R<sub>3</sub> = H, alkyl, alkenyl, cycloalkyl or aralkyl; n = 0, 1 or 2) are prepared as nematocides.

IT 539850-80-1P 539850-81-2P 539850-82-3P  
 539850-83-4P 539850-84-5P 539850-85-6P  
 539850-86-7P 539850-87-8P 539850-88-9P  
 539850-89-0P 539850-90-3P 539850-91-4P  
 539850-92-5P 539850-93-6P 539850-94-7P  
 539850-95-8P 539850-96-9P 539850-97-0P  
 539850-98-1P

RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation as nematocide)

RN 539850-80-1 CAPLUS

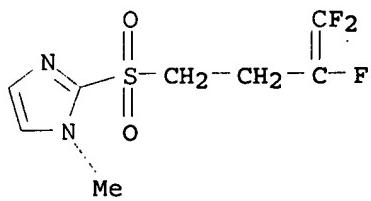
CN 1H-Imidazole, 1-methyl-2-[(3,4,4-trifluoro-3-butyl)thio]- (9CI) (CA INDEX NAME)



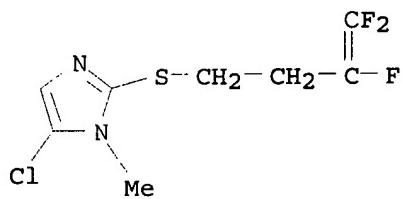
RN 539850-81-2 CAPLUS

CN 1H-Imidazole, 1-methyl-2-[(3,4,4-trifluoro-3-butyl)sulfonyl]- (9CI) (CA

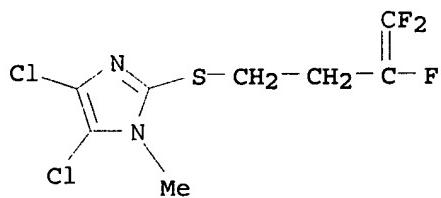
INDEX NAME)



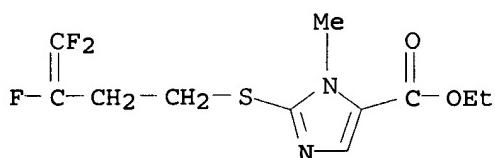
RN 539850-82-3 CAPLUS  
CN 1H-Imidazole, 5-chloro-1-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



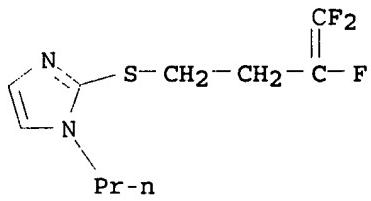
RN 539850-83-4 CAPLUS  
CN 1H-Imidazole, 4,5-dichloro-1-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



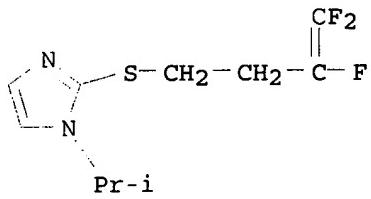
RN 539850-84-5 CAPLUS  
CN 1H-Imidazole-5-carboxylic acid, 1-methyl-2-[(3,4,4-trifluoro-3-but enyl)thio]-, ethyl ester (9CI)  
(CA INDEX NAME)



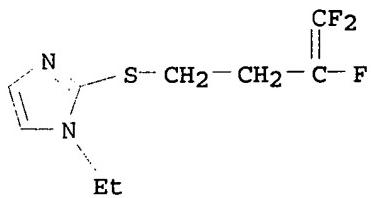
RN 539850-85-6 CAPLUS  
CN 1H-Imidazole, 1-propyl-2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI)  
(CA INDEX NAME)



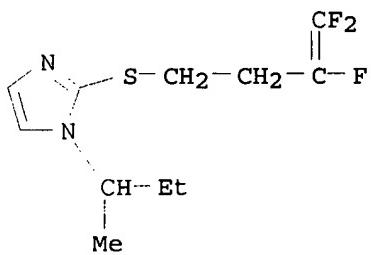
RN 539850-86-7 CAPLUS  
CN 1H-Imidazole, 1-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



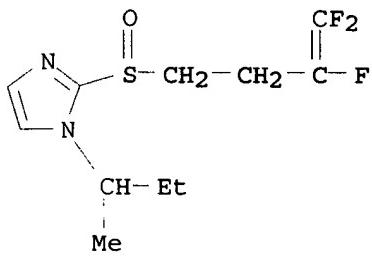
RN 539850-87-8 CAPLUS  
CN 1H-Imidazole, 1-ethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



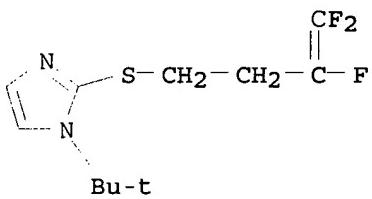
RN 539850-88-9 CAPLUS  
CN 1H-Imidazole, 1-(1-methylpropyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]-  
(9CI) (CA INDEX NAME)



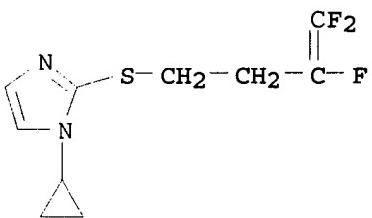
RN 539850-89-0 CAPLUS  
CN 1H-Imidazole, 1-(1-methylpropyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]-  
(9CI) (CA INDEX NAME)



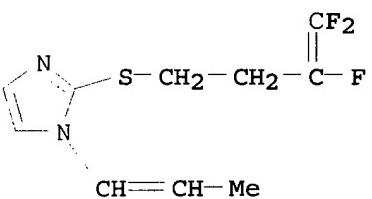
RN 539850-90-3 CAPLUS  
CN 1H-Imidazole, 1- (1,1-dimethylethyl) -2- [(3,4,4-trifluoro-3-butenyl)thio] -  
(9CI) (CA INDEX NAME)



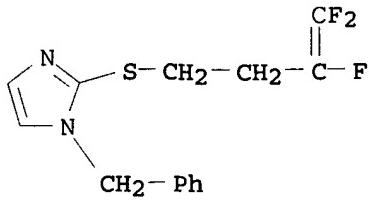
RN 539850-91-4 CAPLUS  
CN 1H-Imidazole, 1-cyclopropyl-2-[(3,4,4-trifluoro-3-butenyl)thio] - (9CI)  
(CA INDEX NAME)



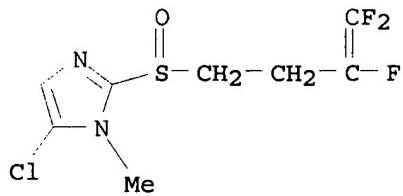
RN 539850-92-5 CAPLUS  
CN 1H-Imidazole, 1- (1-propenyl) -2- [(3,4,4-trifluoro-3-butenyl)thio] - (9CI)  
(CA INDEX NAME)



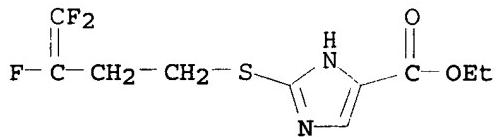
RN 539850-93-6 CAPLUS  
CN 1H-Imidazole, 1- (phenylmethyl) -2- [(3,4,4-trifluoro-3-butenyl)thio] - (9CI)  
(CA INDEX NAME)



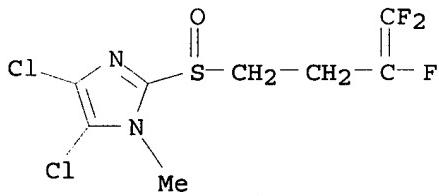
RN 539850-94-7 CAPLUS  
CN 1H-Imidazole, 5-chloro-1-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



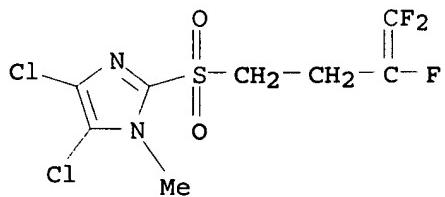
RN 539850-95-8 CAPLUS  
CN 1H-Imidazole-4-carboxylic acid, 2-[(3,4,4-trifluoro-3-butenyl)thio]ethyl ester (9CI) (CA INDEX NAME)



RN 539850-96-9 CAPLUS  
CN 1H-Imidazole, 4,5-dichloro-1-methyl-2-[(3,4,4-trifluoro-3-butene-1-sulfonyl)sulfinyl]- (9CI) (CA INDEX NAME)

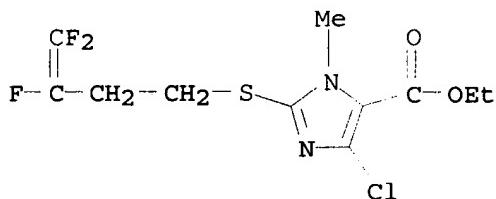


RN 539850-97-0 CAPLUS  
CN 1H-Imidazole, 4,5-dichloro-1-methyl-2-[(3,4,4-trifluoro-3-butene-1-sulfonyl)sulfonyl]- (9CI) (CA INDEX NAME)



RN 539850-98-1 CAPLUS

CN 1H-Imidazole-5-carboxylic acid, 4-chloro-1-methyl-2-[ (3,4,4-trifluoro-3-butene)thio]-, ethyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 8 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:376522 CAPLUS

DOCUMENT NUMBER: 138:350030

TITLE: Preparation of fluorinated thiazolopyridine derivatives as nematocides, acaricides and ecto- and endoparasiticides

INVENTOR(S): Wood, William Wakefield; Kuhn, David; Hu, Yulin; Tecle, Berhane

PATENT ASSIGNEE(S): BASF AG, Germany

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

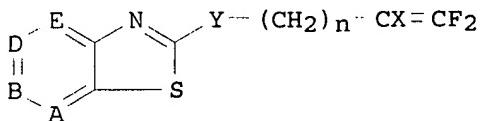
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003039258	A1	20030515	WO 2002-EP10074	20020909
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1427287	A1	20040616	EP 2002-782789	20020909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002012243	A	20041005	BR 2002-12243	20020909
JP 2005507431	T2	20050317	JP 2003-541364	20020909

US 2004254199	A1	20041216	US 2004-488975	20040309
ZA 2004002746	A	20050408	ZA 2004-2746	20040408
PRIORITY APPLN. INFO.:			US 2001-318345P	P 20010910
			WO 2002-EP10074	W 20020909

OTHER SOURCE(S) : MARPAT 138:350030  
GI



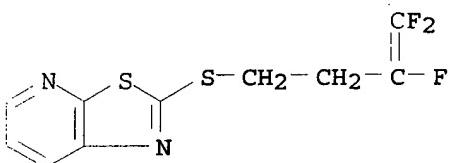
**AB** Prepared are di- and trifluorosubstituted alkene compds. I, wherein X is H or F; Y is O, NR<sub>1</sub> or S(O)<sub>m</sub>; R<sub>1</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl; m is 0, 1, or 2; A,B,D and E are selected from the following : (a) A is N and B, D and E are CR<sub>2</sub>; or (b) B is N and A, D and E are CR<sub>2</sub>; or (c) D is N and A, B, and E are CR<sub>2</sub>; or (d) A and D are N and B and E are CR<sub>2</sub>; or (e) B and E are N and A and D are CR<sub>2</sub>; R<sub>2</sub> is H, halo, NH<sub>2</sub>, NO<sub>2</sub>, CN, alkyl, haloalkyl, alkenyl, alkoxy, haloalkoxy, alkylthio, haloalkylthio, alkylsulfinyl, haloalkylsulfinyl, alkylsulfonyl, haloalkylsulfonyl, aminosulfonyl, alkoxyalkyl, alkylthioalkyl, alkylsulfinylalkyl, alkylsulfonylalkyl, alkylaminoalkyl, dialkylaminoalkyl, hydroxycarbonyl, or alkoxy carbonyl; or Ph which may be substituted with halogen, CN, NO<sub>2</sub>, alkyl, haloalkyl, alkoxy, or haloalkoxy; or a 5- to 6-membered heteroarom. ring system containing 1 to 3 heteroatoms selected from O, S and N, which may be substituted with halogen, CN, NO<sub>2</sub>, alkyl, haloalkyl, alkoxy, or haloalkoxy; n is 1, 2, 3 or 4, and their agriculturally and/or physiol. tolerable salts. I are useful to control nematodes and arachnids, and for treating, controlling, preventing and protecting warm-blooded animals, fish and humans against infestation and infection by helminths, arachnids and arthropod endo- and ectoparasites.

**IT** 521092-75-1P 521092-76-2P 521092-77-3P  
521092-78-4P 521092-79-5P

RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation as nematocide, acaricide and ecto- and endoparasiticide)

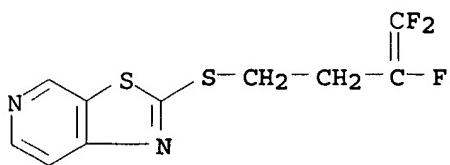
**RN** 521092-75-1 CAPLUS

**CN** Thiazolo[5,4-b]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

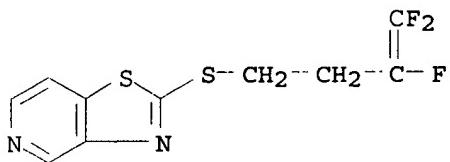


**RN** 521092-76-2 CAPLUS

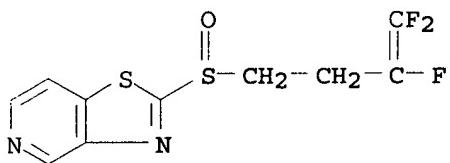
**CN** Thiazolo[5,4-c]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



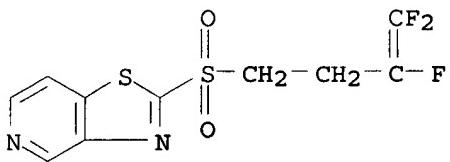
RN 521092-77-3 CAPLUS  
 CN Thiazolo[4,5-c]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 521092-78-4 CAPLUS  
 CN Thiazolo[4,5-c]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



RN 521092-79-5 CAPLUS  
 CN Thiazolo[4,5-c]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)trifluorobutenylthio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:282551 CAPLUS  
 DOCUMENT NUMBER: 138:304270  
 TITLE: Preparation of nematocidal trifluorobutenylthio(or sulfinyl/sulfonyl) thiazoles  
 INVENTOR(S): Watanabe, Yukiyoshi; Ishikawa, Koichi; Otsu, Yuich; Shibuya, Katsuhiko  
 PATENT ASSIGNEE(S): Bayer CropScience AG, Germany  
 SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

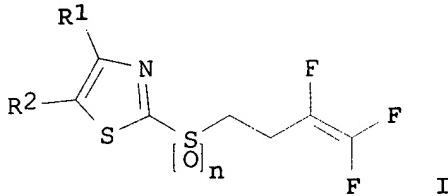
English

FAMILY ACC. NUM. COUNT:

1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003029231	A1	20030410	WO 2002-EP10351	20020916
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003113168	A2	20030418	JP 2001-301316	20010928
PRIORITY APPLN. INFO.:			JP 2001-301316	A 20010928
OTHER SOURCE(S):	MARPAT	138:304270		
GI				



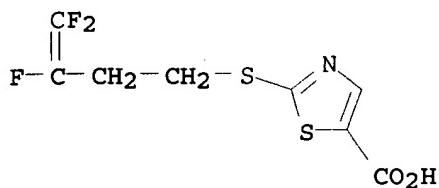
AB The title compds. [I; R1 = H, halo, alkyl, haloalkyl, cycloalkyl, alkoxy carbonylmethyl; R2 = H, halo, alkyl, alkoxyalkyl, alkylthioalkyl, carboxy, alkylaminocarbonyl, cycloalkylaminocarbonyl, dialkylaminocarbonyl, alkoxy carbonyl; n = 0-2; with the proviso that R1 and R2 do not represent hydrogen at the same time, and in case R1 represents hydrogen, then R2 does not represent halogen], useful as nematocides, were prepared. Thus, reacting 5-ethoxycarbonyl-2-mercapto-4-methylthiazole with 4-bromo-1,1,2-trifluoro-1-butene in the presence of K2CO3 in MeCN afforded 65% I [R1 = Me; R2 = CO2Et; n = 0]. Seven of the prepared compds. I showed more than 90% controlling effect at 10 ppm in test for Meloidogyne spp. (soil pot test).

IT 508179-54-2P 508179-77-9P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (preparation of nematicidal trifluorobutenylthio(or sulfinyl/sulfonyl) thiazoles)

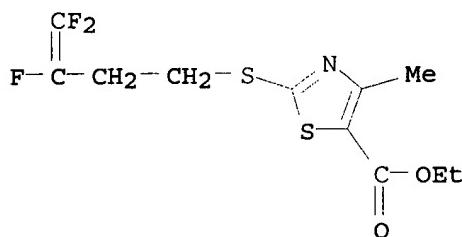
RN 508179-54-2 CAPLUS

CN 5-Thiazolecarboxylic acid, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 508179-77-9 CAPLUS

CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-, ethyl ester (9CI) (CA INDEX NAME)

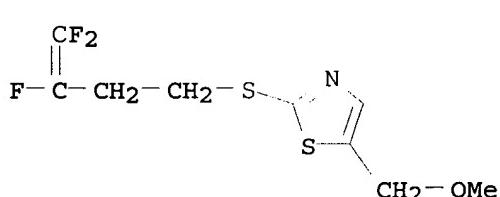


IT	508179-51-9P	508179-52-0P	508179-53-1P
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	508179-61-1P	508179-62-2P	508179-63-3P
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	508179-68-8P	508179-70-2P	508179-71-3P
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	508179-81-5P	508179-83-7P	508179-85-9P
	508179-87-1P	508179-89-3P	508179-91-7P
	508179-92-8P	508179-94-0P	508179-96-2P
	508179-98-4P	508179-99-5P	508180-01-6P
	508180-03-8P	508180-05-0P	508180-07-2P
	508180-09-4P	508180-10-7P	508180-12-9P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

### (preparation of :

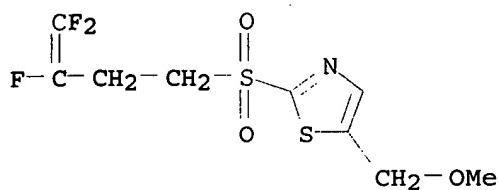
RN 508179-51-9 CAPLUS  
CN Thiazole, 5-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)



BN 508179-52-0 CAPLUS

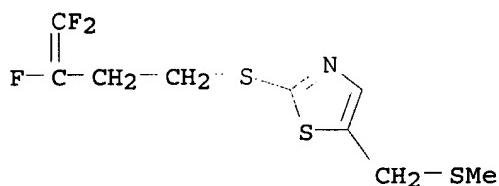
CN Thiazole, 5-[(methoxymethyl)-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]- (9CI)

(CA INDEX NAME)



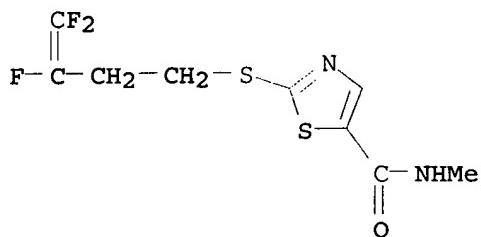
RN 508179-53-1 CAPLUS

CN Thiazole, 5-[(methylthio)methyl]-2-[(3,4,4-trifluoro-3-butenyl)thio] -  
(9CI) (CA INDEX NAME)



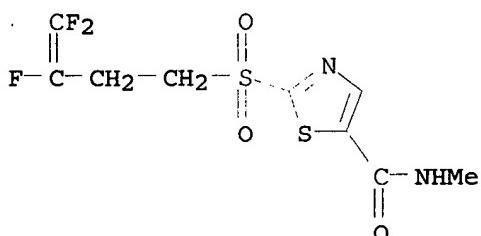
RN 508179-55-3 CAPLUS

CN 5-Thiazolecarboxamide, N-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio] - (9CI)  
(CA INDEX NAME)



RN 508179-56-4 CAPLUS

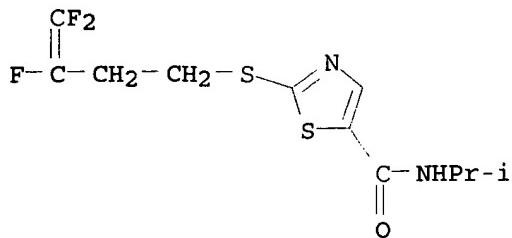
CN 5-Thiazolecarboxamide, N-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl] -  
(9CI) (CA INDEX NAME)



RN 508179-57-5 CAPLUS

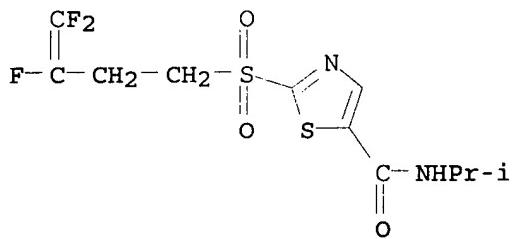
CN 5-Thiazolecarboxamide, N-(1-methylethyl)-2-[(3,4,4-trifluoro-3-

butenyl)thio] - (9CI) (CA INDEX NAME)



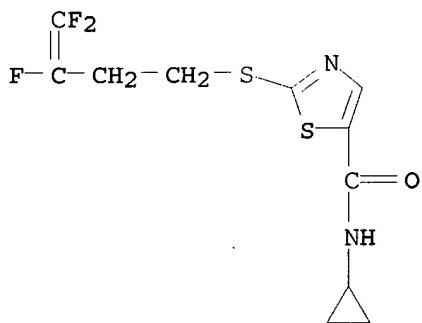
RN 508179-58-6 CAPLUS

CN 5-Thiazolecarboxamide, N-(1-methylethyl)-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl] - (9CI) (CA INDEX NAME)



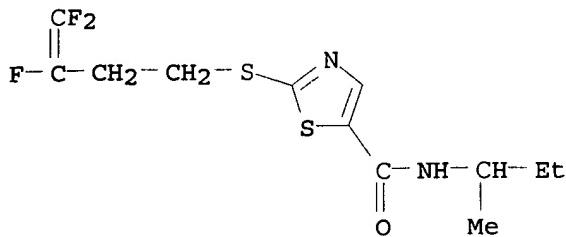
RN 508179-59-7 CAPLUS

CN 5-Thiazolecarboxamide, N-cyclopropyl-2-[(3,4,4-trifluoro-3-but enyl)thio] - (9CI) (CA INDEX NAME)

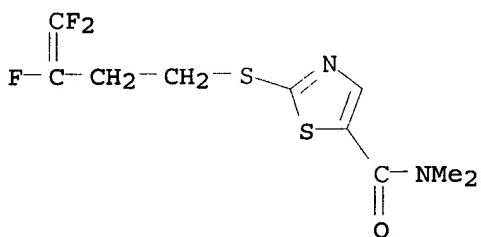


RN 508179-60-0 CAPLUS

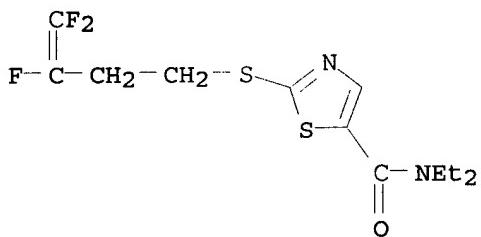
CN 5-Thiazolecarboxamide, N-(1-methylpropyl)-2-[(3,4,4-trifluoro-3-but enyl)thio] - (9CI) (CA INDEX NAME)



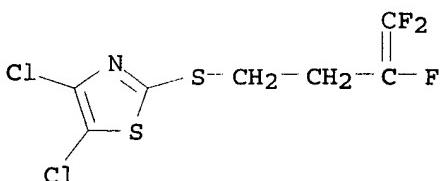
RN 508179-61-1 CAPLUS  
CN 5-Thiazolecarboxamide, N,N-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 508179-62-2 CAPLUS  
CN 5-Thiazolecarboxamide, N,N-diethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

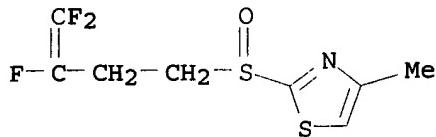


RN 508179-63-3 CAPLUS  
CN Thiazole, 4,5-dichloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

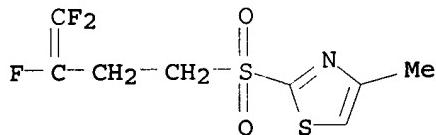


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CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

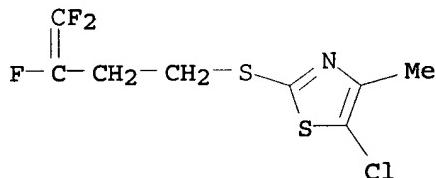
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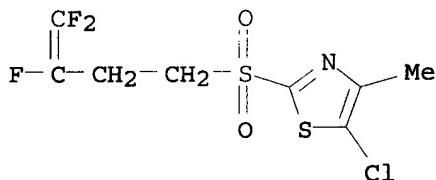
RN 508179-65-5 CAPLUS  
CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA  
INDEX NAME)



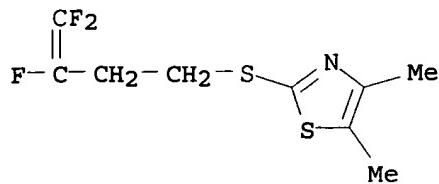
RN 508179-66-6 CAPLUS  
CN Thiazole, 5-chloro-4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI)  
(CA INDEX NAME)



RN 508179-68-8 CAPLUS  
CN Thiazole, 5-chloro-4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI)  
(CA INDEX NAME)

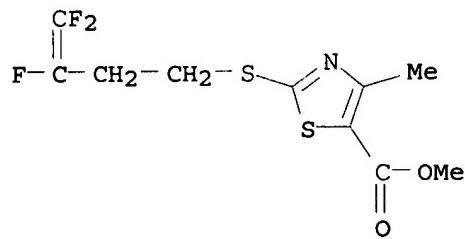


RN 508179-70-2 CAPLUS  
CN Thiazole, 4,5-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA  
INDEX NAME)



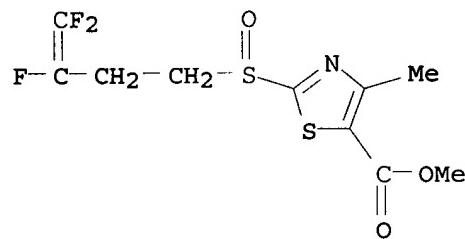
RN 508179-71-3 CAPLUS

CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-but enyl)thio]-, methyl ester (9CI) (CA INDEX NAME)



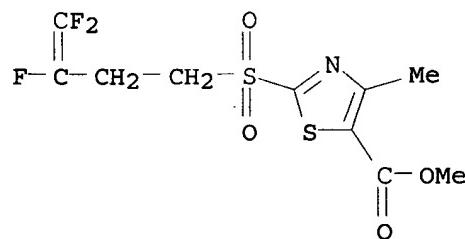
RN 508179-73-5 CAPLUS

CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-but enyl)sulfinyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 508179-75-7 CAPLUS

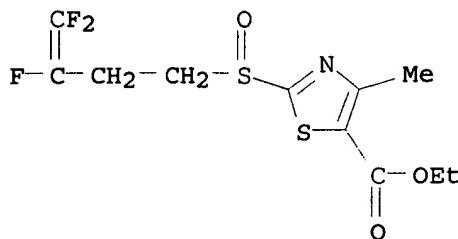
CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 508179-79-1 CAPLUS

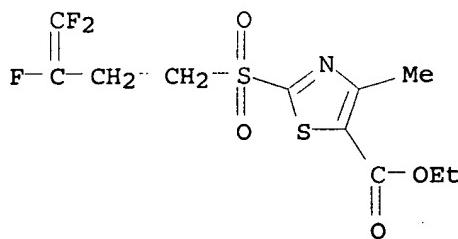
CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-

butenyl)sulfinyl]-, ethyl ester (9CI) (CA INDEX NAME)



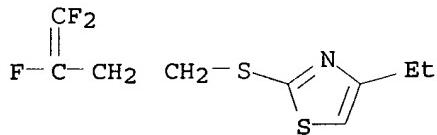
RN 508179-81-5 CAPLUS

CN 5-Thiazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



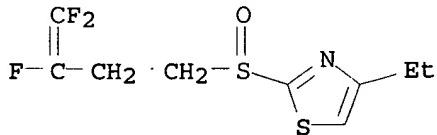
RN 508179-83-7 CAPLUS

CN Thiazole, 4-ethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



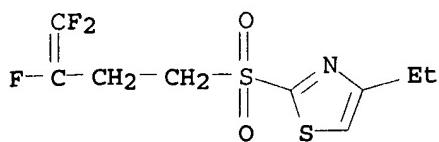
RN 508179-85-9 CAPLUS

CN Thiazole, 4-ethyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

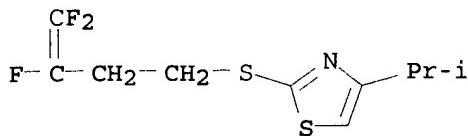


RN 508179-87-1 CAPLUS

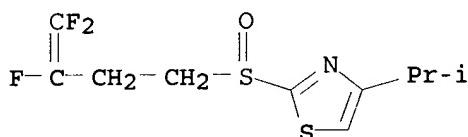
CN Thiazole, 4-ethyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



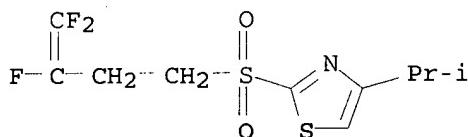
RN 508179-89-3 CAPLUS  
CN Thiazole, 4-(1-methylethyl)-2-[ (3,4,4-trifluoro-3-butenyl)thio] - (9CI)  
(CA INDEX NAME)



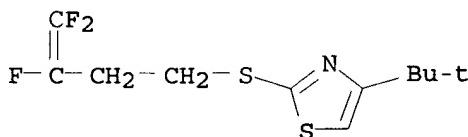
RN 508179-91-7 CAPLUS  
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(CA INDEX NAME)



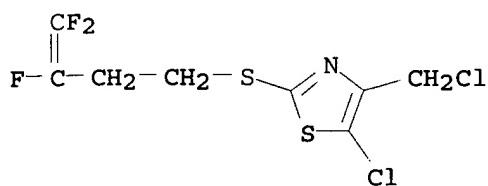
RN 508179-92-8 CAPLUS  
CN Thiazole, 4-(1-methylethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI)  
(CA INDEX NAME)



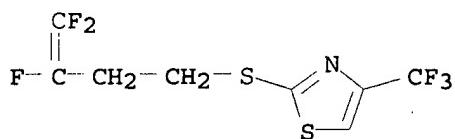
RN 508179-94-0 CAPLUS  
CN Thiazole, 4-(1,1-dimethylethyl)-2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI)  
(CA INDEX NAME)



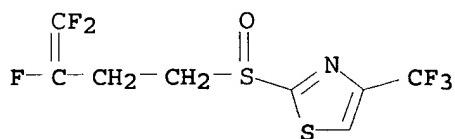
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(9CI) (CA INDEX NAME)



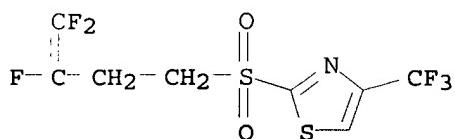
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(CA INDEX NAME)



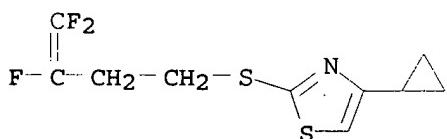
RN 508179-99-5 CAPLUS  
CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-4-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 508180-01-6 CAPLUS  
CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-4-(trifluoromethyl)- (9CI) (CA INDEX NAME)

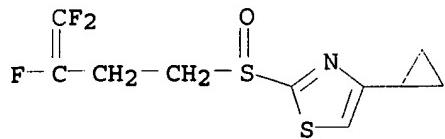


RN 508180-03-8 CAPLUS  
CN Thiazole, 4-cyclopropyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

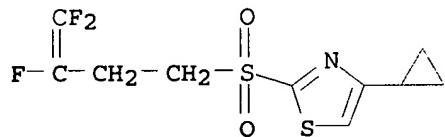


RN 508180-05-0 CAPLUS  
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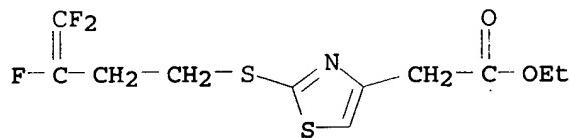
(CA INDEX NAME)



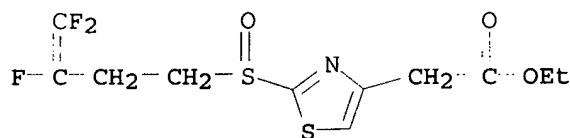
RN 508180-07-2 CAPLUS

CN Thiazole, 4-cyclopropyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI)  
(CA INDEX NAME)

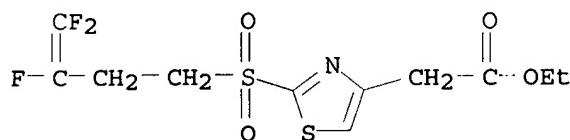
RN 508180-09-4 CAPLUS

CN 4-Thiazoleacetic acid, 2-[(3,4,4-trifluoro-3-butenyl)thio]-, ethyl ester  
(9CI) (CA INDEX NAME)

RN 508180-10-7 CAPLUS

CN 4-Thiazoleacetic acid, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-, ethyl  
ester (9CI) (CA INDEX NAME)

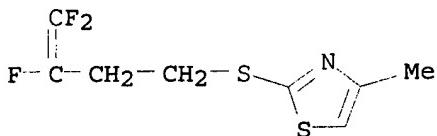
RN 508180-12-9 CAPLUS

CN 4-Thiazoleacetic acid, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-, ethyl  
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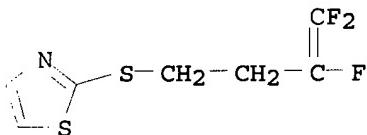
IT 27540-22-3 109993-23-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of nematicidal trifluorobutenylthio(or sulfinyl/sulfonyl) thiazoles)  
RN 27540-22-3 CAPLUS  
CN Thiazole, 4-methyl-2-[(3,4,4-trifluoro-3-but enyl)thio]- (8CI, 9CI) (CA INDEX NAME)



RN 109993-23-9 CAPLUS  
CN Thiazole, 2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2003:58093 CAPLUS  
DOCUMENT NUMBER: 138:106691  
TITLE: Preparation of thiazolo[4,5-b]pyridines as fungicides  
INVENTOR(S): Cuccia, Salvatore; Haley, Gregory J.; Barnes, Keith D.; Wood, William W.; Hu, Yulin; Cotter, Henry Van Tuyl; Gypser, Andreas; Schwoegler, Anja  
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany; Ferguson, Kathryn C.  
SOURCE: PCT Int. Appl., 58 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003006470	A2	20030123	WO 2002-EP7752	20020711
WO 2003006470	A3	20030410		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003083311	A1	20030501	US 2001-902783	20010712
US 6914068	B2	20050705		
EP 1416798	A2	20040512	EP 2002-764678	20020711

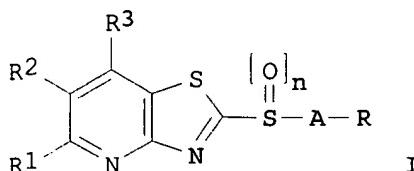
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

CN 1553773 A 20041208 CN 2002-817759 20020711  
JP 2004538279 T2 20041224 JP 2003-512240 20020711

PRIORITY APPLN. INFO.: US 2001-902783 A 20010712  
WO 2002-EP7752 W 20020711

OTHER SOURCE(S): MARPAT 138:106691

GI



AB The title compds. [I; n = 0-2; R1-R3 = H, halo, alkyl, etc.; R = H, CN, halo, etc.; A = alkylene; AR = dihalomethyl, trihalomethyl, alkenyl, etc.], were prepared. Thus, bromination of 2-amino-5-chloropyridine followed by reacting the resulting 2-amino-3-bromo-5-chloropyridine with O-ethylxanthic acid potassium salt, alkylation of 6-chloro-2-mercaptopthiazolo[4,5-b]pyridine with allyl bromide, and oxidation of the corresponding 3-allylthio derivative with H<sub>2</sub>O<sub>2</sub> afforded I [n = 1; R1, R3 = H; R2 = Cl; AR = CH<sub>2</sub>CH:CH<sub>2</sub>] which showed 100% control against grape downy mildew (*Plasmopara viticola*) at 200 ppm. A method for controlling harmful fungi, which comprises treating the fungi or the materials, plants, the soil or the seed to be protected against fungal attack and/or animal pests with an effective amount of at least one thiazolo[4,5-b]pyridine I, is claimed.

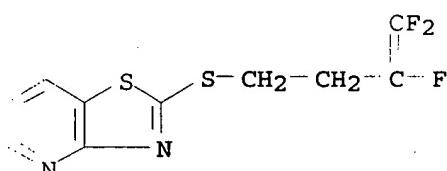
IT 267409-05-2P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of thiazolo[4,5-b]pyridines as fungicides)

RN 267409-05-2 CAPLUS

CN Thiazolo[4,5-b]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 11 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:688564 CAPLUS

DOCUMENT NUMBER: 137:181112

TITLE: Pesticidal and parasiticidal 2-(substituted thio)thiazolo-[4,5-b]pyridine compounds

INVENTOR(S): Wood, William Wakefield

PATENT ASSIGNEE(S): American Cyanamid Company, USA

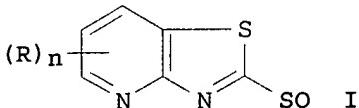
SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6448262	B1	20020910	US 1999-435342	19991105
US 2003069268	A1	20030410	US 2002-165450	20020610
PRIORITY APPLN. INFO.:			US 2000-198595P	P 20000419
			US 1999-435342	A3 19991105

GI

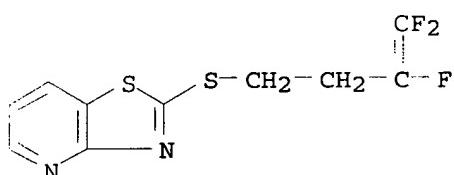


AB 2-(Substituted thio)thiazolo[4,5-b]pyridine compds. I (Markush included) are prepared and used for protection of growing plants from attack or infestation by nematode, insect or acarid pests by applying the compds. to the foliage of the plants, or to the soil or water in which they are growing. The compds. are selected from the group consisting of 2-[(4,4,3-trifluoro-3-butenyl)thio]thiazolo[4,5-b]pyridine, 2-[(bromodifluoromethyl)thio]thiazolo[4,5-b]pyridine, and 2-[(difluoromethyl)thio]thiazolo[4,5-b]pyridine.

IT 267409-05-2P  
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation as pesticide and parasiticide)

RN 267409-05-2 CAPLUS

CN Thiazolo[4,5-b]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:676754 CAPLUS  
 DOCUMENT NUMBER: 135:226985  
 TITLE: Preparation of oxazolyltrifluorobutenes as nematocides  
 INVENTOR(S): Watanabe, Yukiyoshi; Ishikawa, Koichi; Narabu, Shinichi; Gomibuchi, Takuya; Otsu, Yuichi; Shibuya, Katsuhiko  
 PATENT ASSIGNEE(S): Nihon Bayer Agrochem K.K., Japan  
 SOURCE: PCT Int. Appl., 60 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001066529	A1	20010913	WO 2001-IB331	20010308
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2001322988	A2	20011120	JP 2000-240855	20000809
AU 2001035916	A5	20010917	AU 2001-35916	20010308
EP 1263744	A1	20021211	EP 2001-908058	20010308
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001008989	A	20030603	BR 2001-8989	20010308
JP 2003525930	T2	20030902	JP 2001-565345	20010308
NZ 521227	A	20040227	NZ 2001-521227	20010308
ZA 2002006250	A	20030806	ZA 2002-6250	20020806
US 2003109563	A1	20030612	US 2002-220775	20020905
US 6743814	B2	20040601		
PRIORITY APPLN. INFO.:			JP 2000-64615	A 20000309
			JP 2000-240855	A 20000809
			WO 2001-IB331	W 20010308

OTHER SOURCE(S) : MARPAT 135:226985

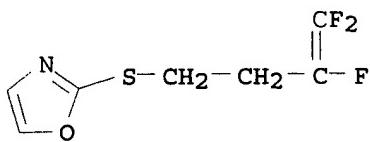
AB RSONCH2CH2CF:CF2 [I; R = (un)substituted 2-oxazolyl; n = 0-2] were prepared. Thus, HOCH2CHO was cyclocondensed with HSCN and the product thioetherified by BrCH2CH2CF:CF2 to give 2-(3,4,4-trifluoro-3-butenylthio)oxazole. Data for biol. activity of I were given.

IT 359631-01-9P 359631-02-0P 359631-03-1P  
 359631-04-2P 359631-05-3P 359631-06-4P  
 359631-07-5P 359631-08-6P 359631-09-7P  
 359631-10-0P 359631-11-1P 359631-12-2P  
 359631-13-3P 359631-14-4P 359631-15-5P  
 359631-16-6P 359631-17-7P 359631-18-8P  
 359631-19-9P 359631-20-2P 359631-21-3P  
 359631-22-4P 359631-23-5P 359631-24-6P  
 359631-25-7P 359631-26-8P 359631-27-9P  
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 359631-31-5P 359631-32-6P 359631-33-7P

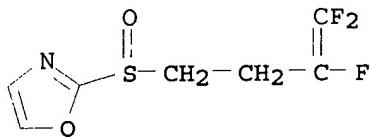
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of oxazolyltrifluorobutenes as nematocides)

RN 359631-01-9 CAPLUS

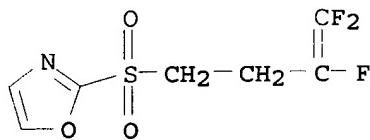
CN Oxazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



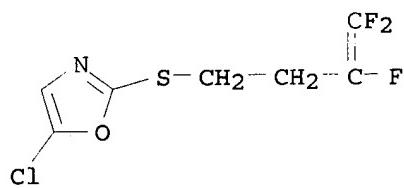
RN 359631-02-0 CAPLUS  
CN Oxazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



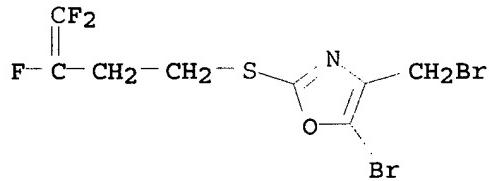
RN 359631-03-1 CAPLUS  
CN Oxazole, 2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



RN 359631-04-2 CAPLUS  
CN Oxazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

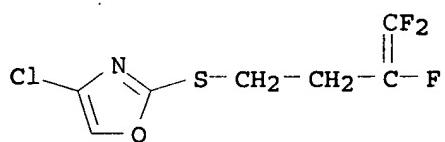


RN 359631-05-3 CAPLUS  
CN Oxazole, 5-bromo-4-(bromomethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

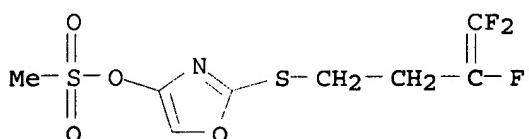


RN 359631-06-4 CAPLUS  
CN Oxazole, 4-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX

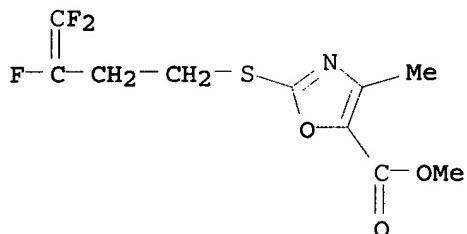
NAME)



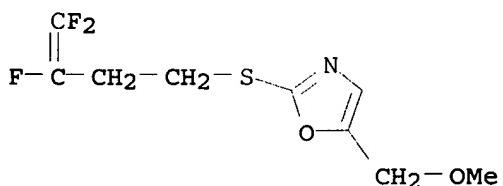
RN 359631-07-5 CAPLUS  
CN 4-Oxazolol, 2-[(3,4,4-trifluoro-3-butenyl)thio]-, methanesulfonate (ester)  
(9CI) (CA INDEX NAME)



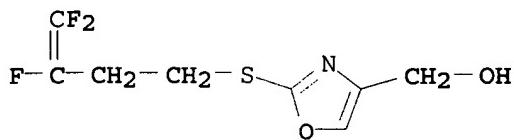
RN 359631-08-6 CAPLUS  
CN 5-Oxazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]-,  
methyl ester (9CI) (CA INDEX NAME)



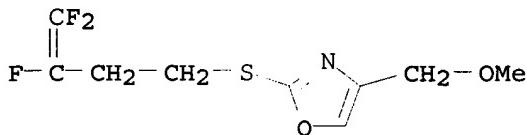
RN 359631-09-7 CAPLUS  
CN Oxazole, 5-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA  
INDEX NAME)



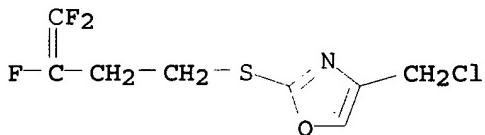
RN 359631-10-0 CAPLUS  
CN 4-Oxazolemethanol, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX  
NAME)



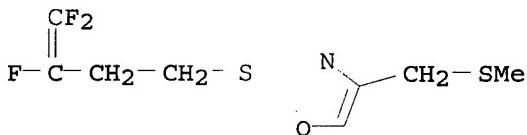
RN 359631-11-1 CAPLUS  
CN Oxazole, 4-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



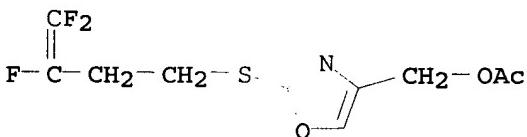
RN 359631-12-2 CAPLUS  
CN Oxazole, 4-(chloromethyl)-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



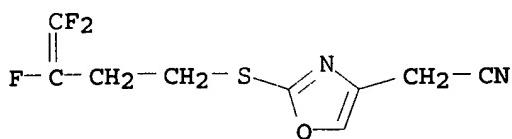
RN 359631-13-3 CAPLUS  
CN Oxazole, 4-[(methylthio)methyl]-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



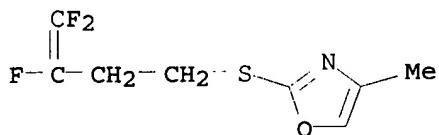
RN 359631-14-4 CAPLUS  
CN 4-Oxazolemethanol, 2-[(3,4,4-trifluoro-3-butenyl)thio]-, acetate (ester) (9CI) (CA INDEX NAME)



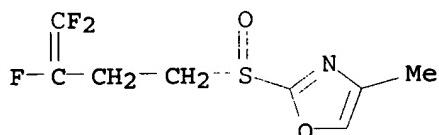
RN 359631-15-5 CAPLUS  
CN 4-Oxazoleacetonitrile, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



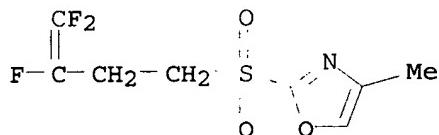
RN 359631-16-6 CAPLUS  
CN Oxazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



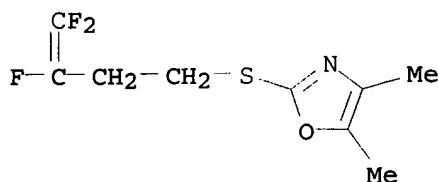
RN 359631-17-7 CAPLUS  
CN Oxazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 359631-18-8 CAPLUS  
CN Oxazole, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)

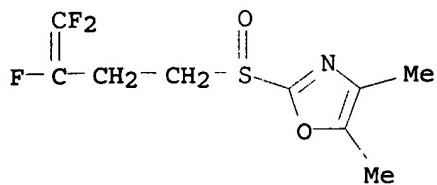


RN 359631-19-9 CAPLUS  
CN Oxazole, 4,5-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)

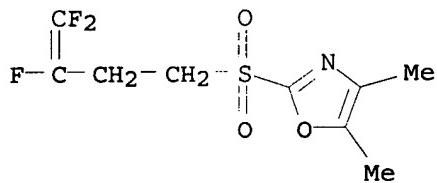


RN 359631-20-2 CAPLUS  
CN Oxazole, 4,5-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

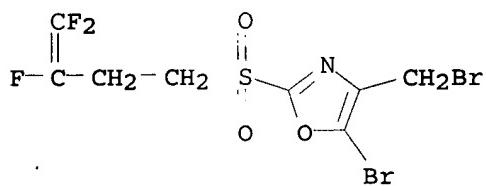
INDEX NAME)



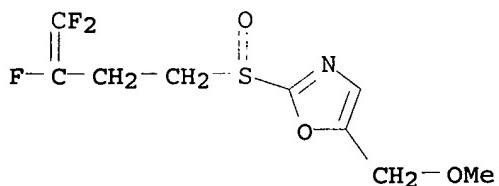
RN 359631-21-3 CAPLUS  
CN Oxazole, 4,5-dimethyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



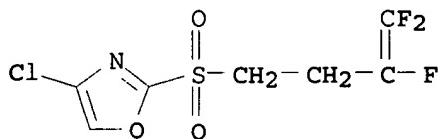
RN 359631-22-4 CAPLUS  
CN Oxazole, 5-bromo-4-(bromomethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



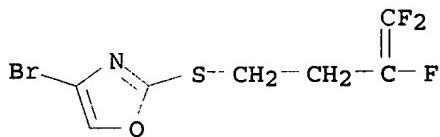
RN 359631-23-5 CAPLUS  
CN Oxazole, 5-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



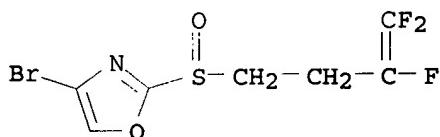
RN 359631-24-6 CAPLUS  
CN Oxazole, 4-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



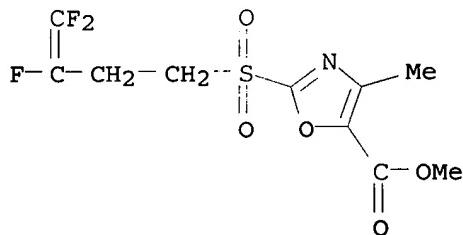
RN 359631-25-7 CAPLUS  
CN Oxazole, 4-bromo-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



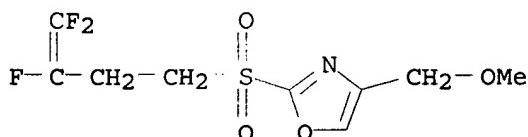
RN 359631-26-8 CAPLUS  
CN Oxazole, 4-bromo-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 359631-27-9 CAPLUS  
CN 5-Oxazolecarboxylic acid, 4-methyl-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

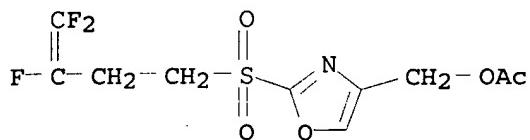


RN 359631-28-0 CAPLUS  
CN Oxazole, 4-(methoxymethyl)-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



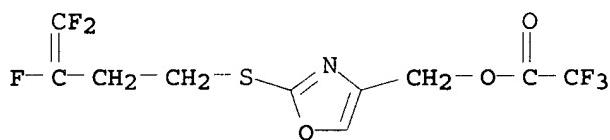
RN 359631-29-1 CAPLUS

CN 4-Oxazolemethanol, 2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]-, acetate  
(ester) (9CI) (CA INDEX NAME)



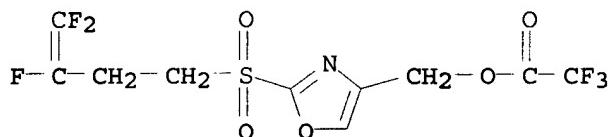
RN 359631-30-4 CAPLUS

CN Acetic acid, trifluoro-, [2-[(3,4,4-trifluoro-3-but enyl)thio]-4-oxazolyl]methyl ester (9CI) (CA INDEX NAME)



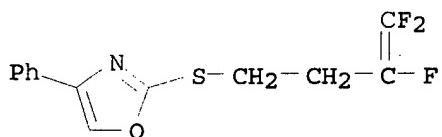
RN 359631-31-5 CAPLUS

CN Acetic acid, trifluoro-, [2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]-4-oxazolyl]methyl ester (9CI) (CA INDEX NAME)



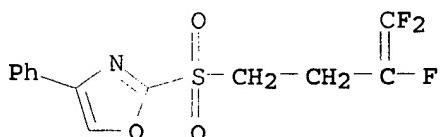
RN 359631-32-6 CAPLUS

CN Oxazole, 4-phenyl-2-[(3,4,4-trifluoro-3-but enyl)thio]- (9CI) (CA INDEX NAME)



RN 359631-33-7 CAPLUS

CN Oxazole, 4-phenyl-2-[(3,4,4-trifluoro-3-but enyl)sulfonyl]- (9CI) (CA INDEX NAME)

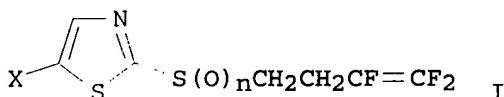


REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:31482 CAPLUS  
 DOCUMENT NUMBER: 134:100860  
 TITLE: Nematocidal trifluorobutenes  
 INVENTOR(S): Watanabe, Yukiyoshi; Ishikawa, Koichi; Otsu, Yuichi;  
 Shibuya, Katsuhiko; Abe, Takahisa  
 PATENT ASSIGNEE(S): Nihon Bayer Agrochem K.K., Japan  
 SOURCE: PCT Int. Appl., 27 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001002378	A1	20010111	WO 2000-IB868	20000628
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2001019685	A2	20010123	JP 1999-191638	19990706
CA 2378148	AA	20010111	CA 2000-2378148	20000628
BR 2000012243	A	20020326	BR 2000-12243	20000628
EP 1200418	A1	20020502	EP 2000-937136	20000628
EP 1200418	B1	20040331		
R: AT, BE, CH, DE, DK, ES, FR, IE, SI, LT, LV, FI, RO, MK,	GB, GR, IT, LI, LU, NL, SE, MC, PT, CY, AL			
TR 200200068	T2	20020521	TR 2002-68	20000628
JP 2003503485	T2	20030128	JP 2001-507816	20000628
AT 263157	E	20040415	AT 2000-937136	20000628
ES 2215671	T3	20041016	ES 2000-937136	20000628
ZA 2001009995	A	20020827	ZA 2001-9995	20011205
US 6734198	B1	20040511	US 2002-30361	20020305
HK 1046403	A1	20050422	HK 2002-107654	20021022
PRIORITY APPLN. INFO.:			JP 1999-191638	A 19990706
			WO 2000-IB868	W 20000628

OTHER SOURCE(S): MARPAT 134:100860  
 GI



AB Title compds. I (n = 0, 1, 2; X = halo) were prepared. Thus, 4.8 g N-chlorosuccinimide was added to a solution of 6.75 g 2-[(3,4,4-trifluoro-3-

butenyl)thio]thiazole in 60 mL CCl<sub>4</sub>, and the mixture was refluxed for 18 h to give I (n = 0, X = Cl). Oxidation of this product with m-chloroperoxybenzoic acid and with 31% H<sub>2</sub>O<sub>2</sub> gave I (n = 1, X = Cl) and I (n = 2, X = Cl), resp. I (n = 0, 1, 2; X = Cl) showed 100-71% controlling effect against *Meloidogyne incognita* on tomatoes.

IT 109993-23-9P 318290-96-9P 318290-97-0P

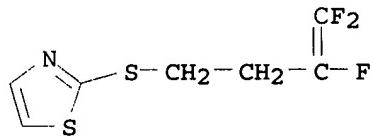
318290-98-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and nematicidal activity of)

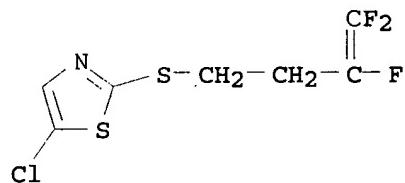
RN 109993-23-9 CAPLUS

CN Thiazole, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



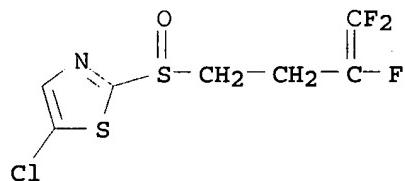
RN 318290-96-9 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



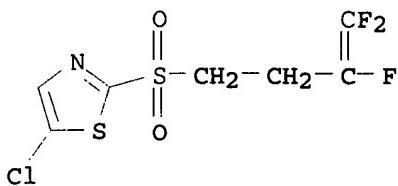
RN 318290-97-0 CAPLUS

CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)



RN 318290-98-1 CAPLUS

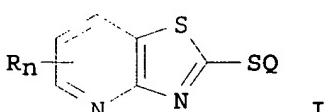
CN Thiazole, 5-chloro-2-[(3,4,4-trifluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:335074 CAPLUS  
 DOCUMENT NUMBER: 132:334457  
 TITLE: Preparation of 2-haloalkylthiothiazolo[4,5-b]pyridines as pesticides and parasiticides.  
 INVENTOR(S): Wood, William Wakefield  
 PATENT ASSIGNEE(S): American Cyanamid Company, USA; BASF AG  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1000946	A2	20000517	EP 1999-308947	19991110
EP 1000946	A3	20010912		
EP 1000946	B1	20031015		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000143668	A2	20000526	JP 1999-316802	19991108
NZ 500926	A	20010427	NZ 1999-500926	19991109
AT 252106	E	20031115	AT 1999-308947	19991110
ES 2210990	T3	20040701	ES 1999-308947	19991110
CA 2289363	AA	20000516	CA 1999-2289363	19991112
BR 9905615	A	20001107	BR 1999-5615	19991112
ZA 9907122	A	20000519	ZA 1999-7122	19991115
KR 2000035479	A	20000626	KR 1999-50630	19991115
MX 9910487	A	20000930	MX 1999-10487	19991115
AU 9959436	A1	20000518	AU 1999-59436	19991116
TR 9902807	A2	20000621	TR 1999-2807	19991116
PRIORITY APPLN. INFO.:			US 1998-192648	A 19981116
OTHER SOURCE(S):	MARPAT 132:334457			
GI				



AB A method for control of helminth, nematode, insect, or acarid pests or parasites comprises contacting said pests or parasites with title compds. [I; R = halo, NO<sub>2</sub>, cyano, alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio,

haloalkylthio, etc.; n = 0-3; Q = alkenyl, haloalkenyl, cycloalkyl, halocycloalkyl, cycloalkenyl, halocycloalkenyl, (substituted) alkyl, haloalkyl]. Thus, thiazolo[4,5-b]pyridine-2-thiol, 1,1,2-trifluoro-4-bromobutane, and K<sub>2</sub>CO<sub>3</sub> were heated in DMF at 60° for 24 h to give 64% 2-[(4,4,4-trifluoro-3-butenyl)thio]thiazolo[4,5-b]pyridine. The latter at 10 ppm reduced root-knot galling of tomatoes by Meloidogyne incognita to 0%, vs. 70% for untreated controls.

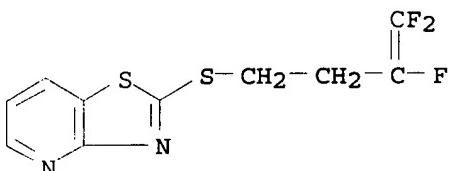
IT 267409-05-2P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 2-haloalkylthiothiazolo[4,5-b]pyridines as pesticides and parasiticides)

RN 267409-05-2 CAPLUS

CN Thiazolo[4,5-b]pyridine, 2-[(3,4,4-trifluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 15 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:709064 CAPLUS

DOCUMENT NUMBER: 129:330724

TITLE: Preparation of 5-chloro-2-(4,4-difluorobut-3-enylsulfonyl)thiazole and intermediates

INVENTOR(S): Bowden, Martin Charles; Brown, Stephen Martin

PATENT ASSIGNEE(S): Zeneca Limited, UK

SOURCE: PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847884	A1	19981029	WO 1998-GB1034	19980408
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
GB 2324526	A1	19981028	GB 1998-7610	19980408
GB 2324526	B2	20010425		
AU 9869301	A1	19981113	AU 1998-69301	19980408
EP 977744	A1	20000209	EP 1998-915010	19980408
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2001521546	T2	20011106	JP 1998-545264	19980408
ZA 9803174	A	19981024	ZA 1998-3174	19980415

TW 422843	B	20010221	TW 1998-87105774	19980416
US 6025497	A	20000215	US 1998-66099	19980423
US 6156904	A	20001205	US 1999-469822	19991222
PRIORITY APPLN. INFO.:			GB 1997-8280	A 19970424
			WO 1998-GB1034	W 19980408
			US 1998-66099	A3 19980423

OTHER SOURCE(S): MARPAT 129:330724

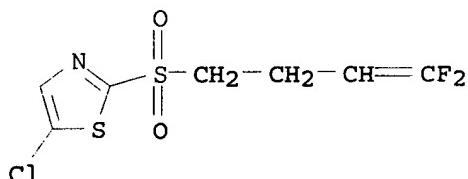
AB The title compound (I), is useful as an agricultural nematocide, was prepared from 2-mercaptopthiazole by a multistep process involving S-alkylation with F<sub>2</sub>ClCCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>X (X = leaving group), hetero ring chlorination, alkyl chain dehydrochlorination and S oxidation to the corresponding sulfone. For example, refluxing a mixture of 2-mercaptopthiazole, F<sub>2</sub>ClCCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>Cl and K<sub>2</sub>CO<sub>3</sub> in Me<sub>2</sub>CO gave 94% 2-(4-chloro-4,4-difluorobutylthio)thiazole which was chlorinated with SO<sub>2</sub>Cl<sub>2</sub> in AcNMe<sub>2</sub> to give 87% 5-chloro-2-(4-chloro-4,4-difluorobutylthio)thiazole. This was stirred with powdered K<sub>2</sub>CO<sub>3</sub> in AcNMe<sub>2</sub> and the product (86%) treated with H<sub>2</sub>O<sub>2</sub> in AcOH to give 82% I.

IT 172933-33-4P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of nematocidal 5-chloro-2-(4,4-difluorobut-3-enylsulfonyl)thiazole and intermediates)

RN 172933-33-4 CAPLUS

CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:621188 CAPLUS

DOCUMENT NUMBER: 129:244865

TITLE: Derivatives of 4,4-difluorobut-3-enylsulfonic acid and their use as pesticides

INVENTOR(S): Salmon, Roger

PATENT ASSIGNEE(S): Zeneca Ltd., UK

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9840352	A1	19980917	WO 1998-GB692	19980304
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,				

UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,  
 FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,  
 GA, GN, ML, MR, NE, SN, TD, TG

AU 9865076	A1	19980929	AU 1998-65076	19980304
EP 984927	A1	20000315	EP 1998-910847	19980304
EP 984927	B1	20030326		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2001514649	T2	20010911	JP 1998-539343	19980304
AT 235464	E	20030415	AT 1998-910847	19980304
PT 984927	T	20030630	PT 1998-910847	19980304
DE 29824975	U1	20031127	DE 1998-29824975	19980304
ES 2195326	T3	20031201	ES 1998-910847	19980304
ZA 9802017	A	19980914	ZA 1998-2017	19980310
US 6274632	B1	20010814	US 1999-380912	19990910
GB 1997-5120 A 19970312				
EP 1998-910847 A 19980304				
WO 1998-GB692 W 19980304				

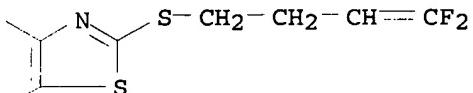
PRIORITY APPLN. INFO.:

OTHER SOURCE(S): CASREACT 129:244865; MARPAT 129:244865

AB The title compds. CF<sub>2</sub>:CXCH<sub>2</sub>CH<sub>2</sub>S(O)R (I; X represents hydrogen, halo or lower alkyl, and R represents a group OR<sub>1</sub> or NR<sub>2</sub>R<sub>3</sub> wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are halo, cyano, nitro, OH, etc.) are prepared I are useful for controlling insect and like pests of agriculture. Thus, bis(4,4-difluorobut-3-enyl)disulfide (preparation given) was reacted with n-hexanol in the presence of K<sub>2</sub>CO<sub>3</sub> and treated with N-bromosuccinimide to give n-hexyl 4,4-difluorobut-3-enylsulfinate. I were tested and showed good activity against spider mites.

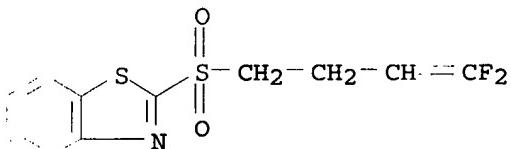
IT 160136-15-2, 2-(4,4-Difluorobut-3-enylthio)benzothiazole  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of 4,4-difluorobut-3-enylsulfinic acid derivs. as pesticides)

RN 160136-15-2 CAPLUS  
 CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



IT 213197-17-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of 4,4-difluorobut-3-enylsulfinic acid derivs. as pesticides)

RN 213197-17-2 CAPLUS  
 CN Benzothiazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1995:994834 CAPLUS  
 DOCUMENT NUMBER: 124:117350  
 TITLE: Preparation of (4,4-difluorobut-3-enylthio)-  
 substituted heterocyclic or carbocyclic ring compounds  
 having pesticidal activity  
 INVENTOR(S): Turnbull, Michael Drysdale; Bansal, Harjinder Singh;  
 Smith, Alison Mary; Salmon, Roger; Fitzjohn, Steven;  
 Godrey, Christopher Richard Ayles; Hotson, Matthew  
 Brian; Sillars, Nan Catherine; Dowling, Alan John  
 PATENT ASSIGNEE(S): Zeneca Ltd., UK  
 SOURCE: PCT Int. Appl., 194 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9524403	A1	19950914	WO 1995-GB400	19950227
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2182520	AA	19950914	CA 1995-2182520	19950227
AU 9518164	A1	19950925	AU 1995-18164	19950227
AU 685242	B2	19980115		
EP 749433	A1	19961227	EP 1995-909854	19950227
EP 749433	B1	20030507		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1143958	A	19970226	CN 1995-192029	19950227
HU 74902	A2	19970228	HU 1996-2417	19950227
HU 215211	B	19981028		
BR 9507042	A	19970909	BR 1995-7042	19950227
JP 09510197	T2	19971014	JP 1995-523286	19950227
CZ 285605	B6	19990915	CZ 1996-2632	19950227
RU 2151147	C1	20000620	RU 1996-120148	19950227
RO 116399	B1	20010130	RO 1996-1788	19950227
SK 281491	B6	20010409	SK 1996-1148	19950227
AT 239714	E	20030515	AT 1995-909854	19950227
PT 749433	T	20030829	PT 1995-909854	19950227
ES 2199240	T3	20040216	ES 1995-909854	19950227
US 5705516	A	19980106	US 1995-400912	19950308
US 5912243	A	19990615	US 1996-702623	19960828
FI 9603539	A	19960909	FI 1996-3539	19960909
NO 9603776	A	19961107	NO 1996-3776	19960909
LV 11686	B	19970620	LV 1996-363	19960910
US 5952359	A	19990914	US 1997-887858	19970703
PRIORITY APPLN. INFO.:				
		GB 1994-4716	A	19940310
		GB 1994-4717	A	19940310
		GB 1994-4718	A	19940310
		GB 1994-4719	A	19940310
		GB 1994-4720	A	19940310
		GB 1994-4721	A	19940310
		GB 1995-521	A	19950111
		WO 1995-GB400	W	19950227
		US 1995-400912	A3	19950308

OTHER SOURCE(S) : MARPAT 124:117350  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title compds. represented by the general formula RS(O)nCH<sub>2</sub>CH<sub>2</sub>CH:CF<sub>2</sub> [n = 0,1,2; R is a group of formulas Q - Q13 (X = O, S), etc., wherein the S(O)mCH<sub>2</sub>CH<sub>2</sub>CH:CF<sub>2</sub> group is at least one of R1 (when attached to a carbon atom), R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> or R<sub>6</sub>; e.g. when R<sub>1</sub> is attached to a carbon atom, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> are each independently H, optionally substituted alkyl, optionally substituted alkenyl, alkynyl, cycloalkyl, alkylcycloalkyl, alkoxy, alkenyloxy, alkynyoxy, hydroxyalkyl, alkoxylalkyl, optionally substituted aryl, optionally substituted arylalkyl, optionally substituted heteroaryl, optionally substituted heteroarylalkyl, optionally substituted aryloxy, optionally substituted heteroaryloxy, optionally substituted heteroarylalkoxy, optionally substituted heteroaryloxyalkyl, haloalkyl, haloalkenyl, haloalkynyl, haloalkoxy, haloalkenyloxy, haloalkynyoxy, halo, HO, cyano, NO<sub>2</sub>, NR<sub>7</sub>R<sub>8</sub>, NR<sub>7</sub>COR<sub>8</sub>, NR<sub>7</sub>CSR<sub>8</sub>, NR<sub>7</sub>SO<sub>2</sub>R<sub>8</sub>, N(SO<sub>2</sub>R<sub>7</sub>)(SO<sub>2</sub>R<sub>8</sub>), COR<sub>7</sub>, CONR<sub>7</sub>R<sub>8</sub>, alkyl-CNR<sub>7</sub>R<sub>8</sub>, CR<sub>7</sub>NR<sub>8</sub>, CO<sub>2</sub>R<sub>7</sub>, O<sub>2</sub>CR<sub>7</sub>, SR<sub>7</sub>, SOR<sub>7</sub>, SO<sub>2</sub>R<sub>7</sub>, alkyl-SR<sub>7</sub>, alkyl-SOR<sub>7</sub>, alkyl-SO<sub>2</sub>R<sub>7</sub>, OSO<sub>2</sub>R<sub>7</sub>, SO<sub>2</sub>NR<sub>7</sub>R<sub>8</sub>, CSNR<sub>7</sub>R<sub>9</sub>, SiR<sub>7</sub>R<sub>8</sub>R<sub>9</sub>, OCH<sub>2</sub>CO<sub>2</sub>R<sub>7</sub>, OCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>R<sub>7</sub>, CONR<sub>7</sub>SO<sub>2</sub>R<sub>8</sub>, alkyl-CNR<sub>7</sub>SO<sub>2</sub>R<sub>8</sub>, NHCONR<sub>7</sub>R<sub>8</sub>, NHCSNR<sub>7</sub>R<sub>8</sub>, or an adjacent pair of R<sub>1</sub> - R<sub>6</sub> when taken together form a fused 5- or 6-membered carbocyclic or heterocyclic ring] are prepared. Thus, a solution of 4,4-difluorobut-3-enyl thioacetate in 50% aqueous NaOH was stirred vigorously for 30 min, followed by successively adding Et 5-chloro-4-methylisoxazole in CH<sub>2</sub>Cl<sub>2</sub> and Bu<sub>4</sub>NBr, and the reaction mixture was stirred at the ambient temperature for 3 h to give Et

5-(4,4-difluorobut-3-enylthio)-3-methylisoxazole-4-carboxylate. The latter compound was saponified with a mixture of 2 M NaOH and isopropanol and acidified with 2 M HCl to give the acid 5-(4,4-difluorobut-3-enylthio)-3-methylisoxazole-4-carboxylic acid, which was treated with Et chloroformate and Et<sub>3</sub>N in CH<sub>2</sub>Cl<sub>2</sub> at 0° and then with NH<sub>3</sub>(g) to give the amide 5-(4,4-difluorobut-3-enylthio)-3-methylisoxazole-4-carboxamide (I). I controlled 100% Tetranychus urticae (spider mite) and Myzus persicae (green peach aphid) upon contract at 100 ppm and 100% Meloidogyne incognita (root knot nematode) at 2 ppm as a drench solution to 2 wk old cucumber plants.

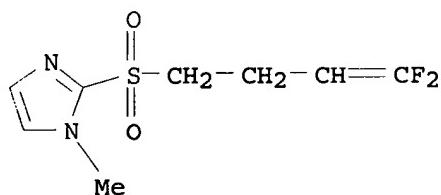
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 172933-95-8P 172933-96-9P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of (difluorobutenylthio)-substituted heterocyclic or carbocyclic ring compds. as pesticides)

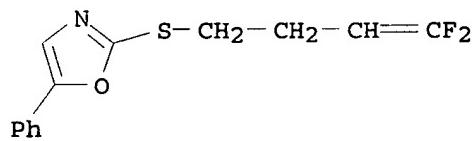
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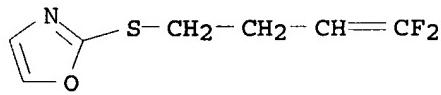
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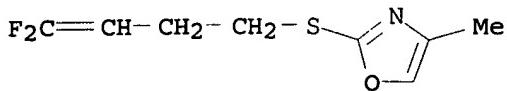
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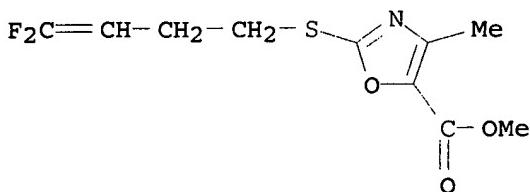


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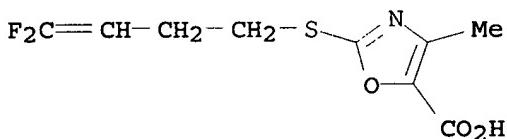
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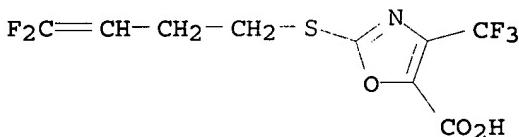
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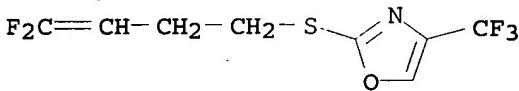
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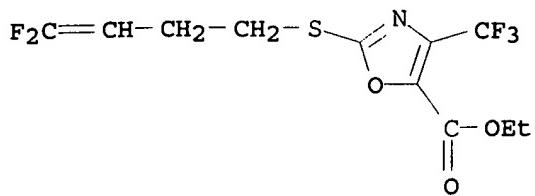
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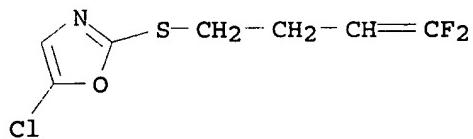
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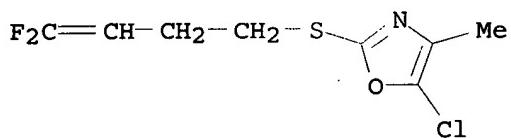
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(trifluoromethyl)-, ethyl ester (9CI) (CA INDEX NAME)



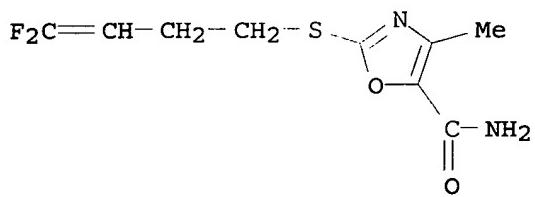
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CN Oxazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



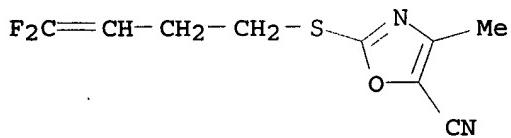
RN 172932-95-5 CAPLUS  
CN Oxazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)



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(CA INDEX NAME)



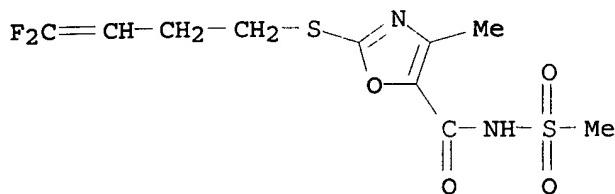
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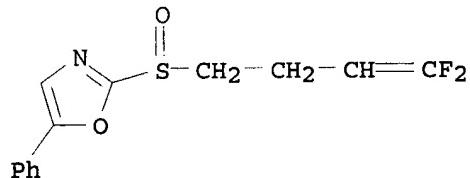
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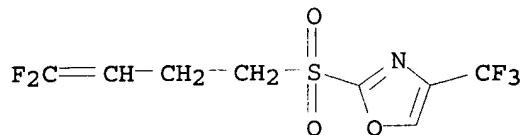
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CN Oxazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]-5-phenyl- (9CI) (CA INDEX NAME)



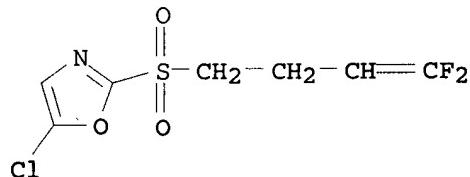
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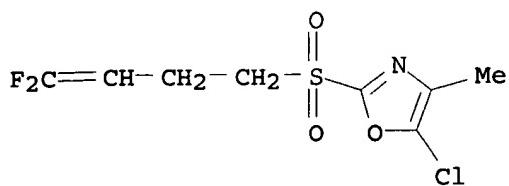
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CN Oxazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)

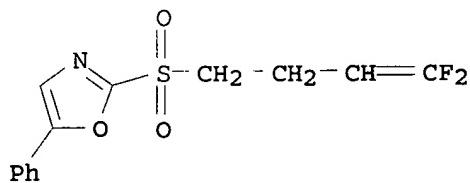


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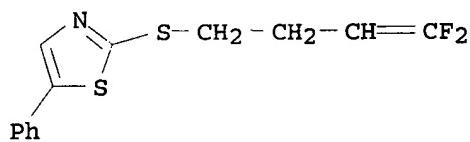
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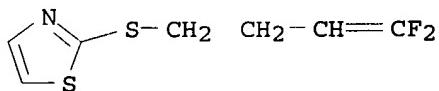
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CN Oxazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-5-phenyl- (9CI) (CA INDEX NAME)



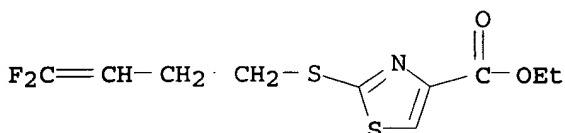
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CN Thiazole, 2-[(4,4-difluoro-3-butenyl)thio]-5-phenyl- (9CI) (CA INDEX NAME)



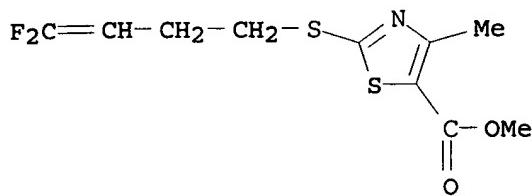
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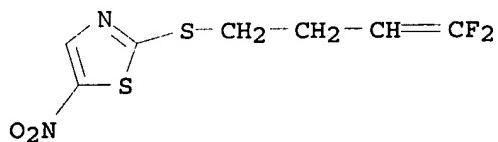
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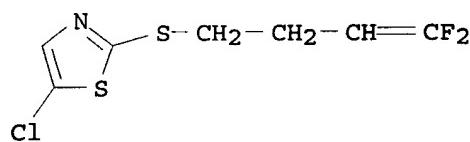
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CN 5-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl-, methyl ester (9CI) (CA INDEX NAME)



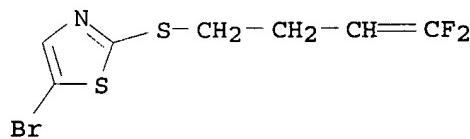
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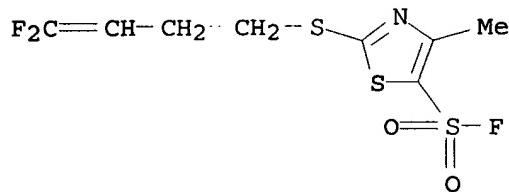
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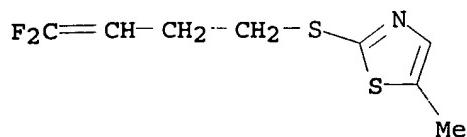
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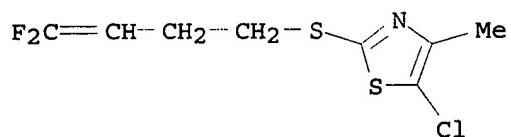
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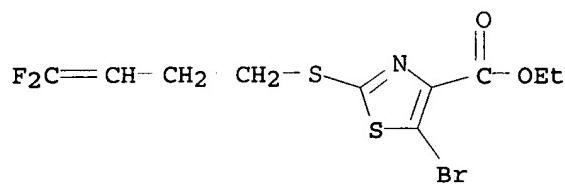
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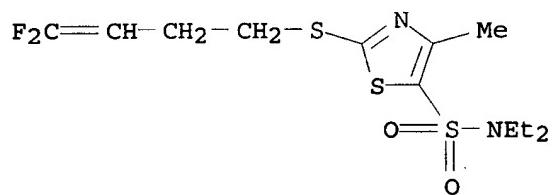
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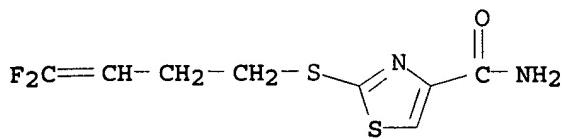
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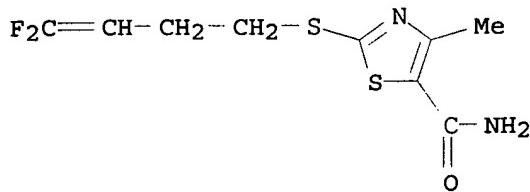
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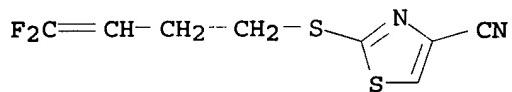
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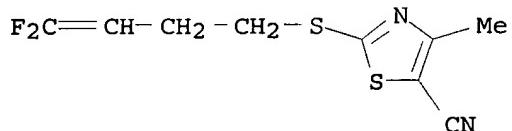
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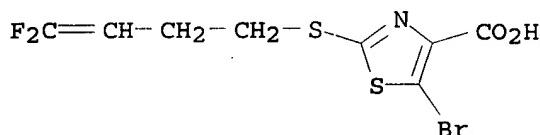
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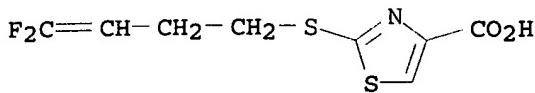
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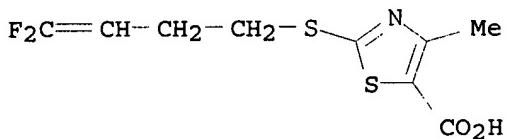


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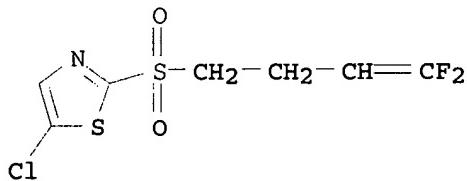
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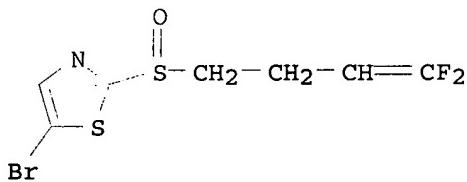
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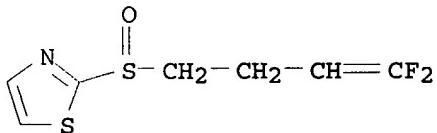
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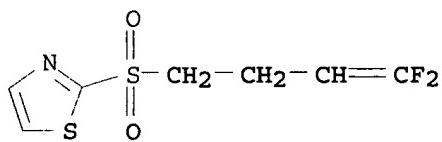
RN 172933-35-6 CAPLUS

CN Thiazole, 2-[(4,4-difluoro-3-butenyl)sulfinyl]- (9CI) (CA INDEX NAME)

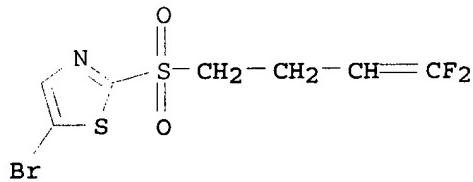


RN 172933-36-7 CAPLUS

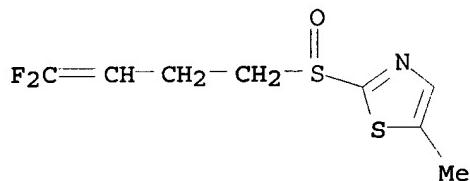
CN Thiazole, 2-[(4,4-difluoro-3-butenyl)sulfonyl]- (9CI) (CA INDEX NAME)



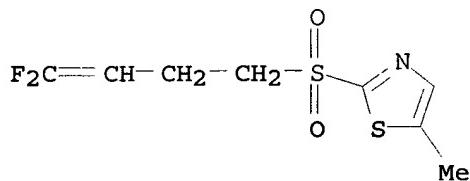
RN 172933-37-8 CAPLUS  
CN Thiazole, 5-bromo-2-[(4,4-difluoro-3-but enyl)sulfonyl]- (9CI) (CA INDEX  
NAME)



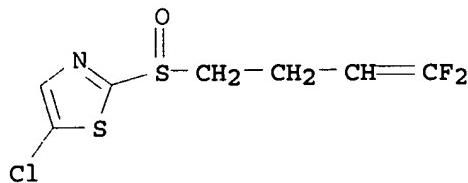
RN 172933-38-9 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-but enyl)sulfinyl]-5-methyl- (9CI) (CA INDEX  
NAME)



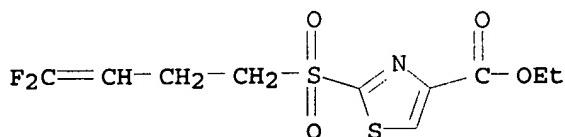
RN 172933-39-0 CAPLUS  
CN Thiazole, 2-[(4,4-difluoro-3-but enyl)sulfonyl]-5-methyl- (9CI) (CA INDEX  
NAME)



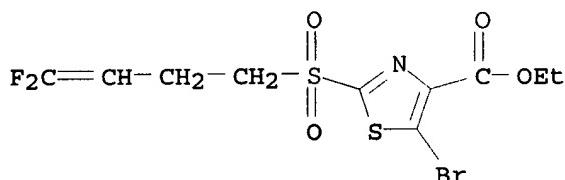
RN 172933-40-3 CAPLUS  
CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-but enyl)sulfinyl]- (9CI) (CA INDEX  
NAME)



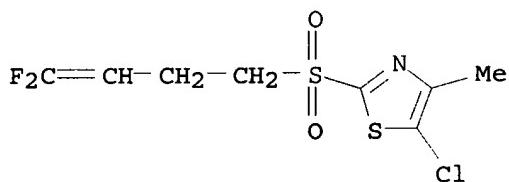
RN 172933-45-8 CAPLUS  
CN 4-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



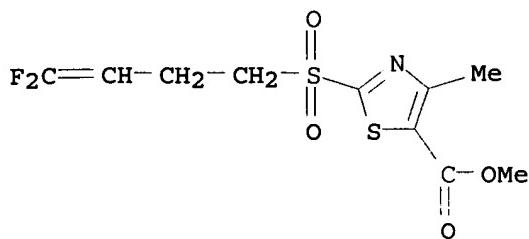
RN 172933-46-9 CAPLUS  
CN 4-Thiazolecarboxylic acid, 5-bromo-2-[(4,4-difluoro-3-butenyl)sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



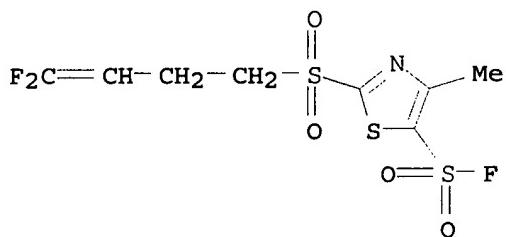
RN 172933-47-0 CAPLUS  
CN Thiazole, 5-chloro-2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-methyl- (9CI)  
(CA INDEX NAME)



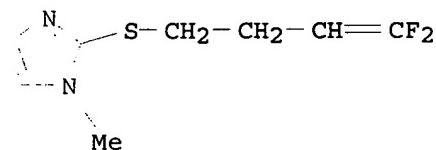
RN 172933-48-1 CAPLUS  
CN 5-Thiazolecarboxylic acid, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-methyl-, methyl ester (9CI) (CA INDEX NAME)



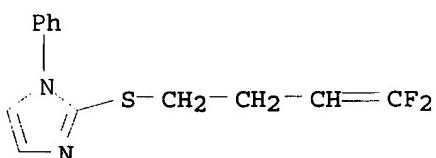
RN 172933-49-2 CAPLUS  
CN 5-Thiazolesulfonyl fluoride, 2-[(4,4-difluoro-3-butenyl)sulfonyl]-4-methyl- (9CI) (CA INDEX NAME)



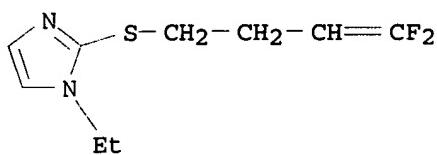
RN 172933-50-5 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-methyl- (9CI) (CA INDEX NAME)



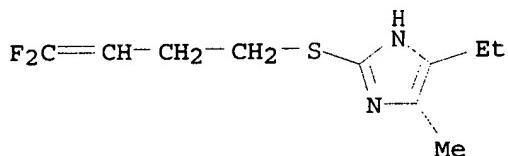
RN 172933-51-6 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-phenyl- (9CI) (CA INDEX NAME)



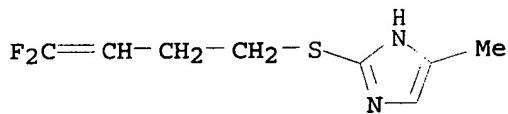
RN 172933-52-7 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-1-ethyl- (9CI) (CA INDEX NAME)



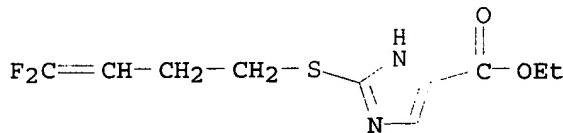
RN 172933-53-8 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-ethyl-5-methyl- (9CI)  
(CA INDEX NAME)



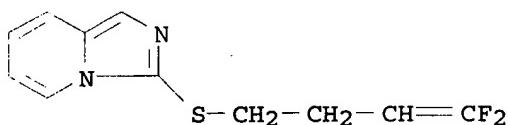
RN 172933-54-9 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]-4-methyl- (9CI) (CA INDEX NAME)



RN 172933-55-0 CAPLUS  
CN 1H-Imidazole-4-carboxylic acid, 2-[(4,4-difluoro-3-butenyl)thio]-, ethyl ester (9CI) (CA INDEX NAME)



RN 172933-56-1 CAPLUS  
CN Imidazo[1,5-a]pyridine, 3-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)



RN 172933-57-2 CAPLUS  
CN 1H-Imidazole, 2-[(4,4-difluoro-3-butenyl)thio]- (9CI) (CA INDEX NAME)